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ABSTRACT

The project's broad objective was to improve patient care through the development of a manual or computer-assisted tool for assessing patient health/illness status and recording essential information throughout a period of care. The project sought contributions from practicing nurses in identifying the descriptive clinical information needed to give excellent patient care. Essential information was then organized into nursing assessment forms adaptable to machine processing. Chapter one introduces the philosophy, objectives, and scope of the study. The past, current, changing, and future role of the nurse is considered in chapter two. Chapter three describes computer technology in medical institutions. The developmental process of the project, including testing and revision of nursing assessment forms, is reviewed in chapter four. Chapter five presents preparations for computer applications. Chapter six presents the summary, conclusions, applications and recommendations. Content of the assessment tools was considered appropriate to decisions made in developing a plan of care, but a more extensive study to establish validity of terms and adequacy of data is recommended. Nursing assessment forms and manuals for hospitalized patients and community health are included. Also appended are a description of study hospitals and agencies, members of committees, and community health concepts. (Author/NH)

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SYSTEMATIC NURSING ASSESSMENT

A STEP TOWARD AUTOMATION

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Foreword

In recent years there has been increasing concern with the quantity and quality of information being processed by nursing personnel. Studies have shown that one-third of a nurse's workday, whether in hospitals or ambulatory care settings, is devoted to information handling of one kind or another. Many questions have been raised about the information burden that nurses have assumed, including its relevance and usefulness to decision-making.

Because of the Division of Nursing's long-standing concern with increasing the efficient use of nursing time and improving the quality of nursing care provided, the project reported in this publication was supported. Its purpose was to thoroughly examine information needed by nurses about patients in order to effectively plan the care to be provided. Logically structured, computer-manageable forms were developed to provide systematic and comprehensive information about patient's nursing problems and for recording progress made in meeting them.

This report describes the rationale for the information system that was developed and contains the final versions of all the forms used to gather the information. It is anticipated that this material will be of value to all who are concerned with improving the content and format of nursing information in order to improve the quality of patient care.

Jessie M. Scott

JESSIE M. SCOTT
Assistant Surgeon General
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Preface

The search for better assessment methods to help nurses plan for patient care in a more effective and systematized way was the motivating force in this study of a variety of methods for making nursing decisions.

Professional nurses have long been identifying and interpreting clues related to the gathering of information from which such decisions could be consistently drawn. The organization, systematization, and clustering of such clues required an extensive search of what was meaningful to nurses in different clinical settings. It also required the input of teachers and students who were constantly exploring new ideas of communication for effective patient care.

The research staff who designed the project as a contract to fulfill some basic goals for collecting, disseminating and utilizing information data for patients' records, have spent 3 years refining an assessment tool with two major factors in mind. First, a guideline was needed to obtain the most accurate information possible about individual patients in the context of their families and the community. Second, an assessment tool was needed which was computer manageable in the sense that it could be adapted to an on-line system of computer input and retrieval which would supply significant information to multiple sources.

An exploration in depth has been accomplished in the field of information gathering. Two major sets of assessment records have been developed from an exhaustive trial of forms in a variety of settings. Consultation has been obtained from resources country-wide to insure as broad a view as possible of the current efforts in the development of new record systems. Faculty, students and nursing service staff members in hospitals and community health agencies have participated in the trials of these forms in real situations.

Workshops and conferences have been held to inform, collaborate, and support participants in the total ventures. To the project staff this has been an exciting, though arduous venture. The promise of the results of this study is great. The potential lies in continued experimentation with the manual forms and an opportunity for sustained use in a patient-oriented, computer-assisted information system. The significant data for making accurate nursing decisions about patient care have been identified. Finding effective ways of communicating and disseminating the plans generated by such decisions is the next giant step.

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We wish to express sincere appreciation to the many persons who contributed to the project. While we cannot identify here all these persons by name, we acknowledge our indebtedness for their assistance and sustained interest which assured the successful completion of the project. We are grateful to the nursing staffs of the field study hospitals and agencies for their help in testing and evaluating the nursing assessment forms throughout the developmental process; and to Jessie M. Scott, Director, Division of Nursing, our contract officers, Dr. Eugene Levine and Mr. Stanley Siegel, and the other staff members of the Division who helped us achieve the objectives of the project by their support and encouragement.

Members of the faculty and the Dean of the School of Nursing, State University of New York at Buffalo, supported the project magnificently by serving in an advisory capacity and in various other ways. Particular thanks are due Ruth T. McGrorey, Ed.D., Dean of the School of Nursing; Mary Fussell, M.S., Associate Professor, Adult Health; and Mary Frainier, M.S., Assistant Professor, Adult Health.

We are indebted to the following members of the project staff who worked diligently to achieve our objectives: Judith Schneider, M.S., Assistant Professor and Research Associate; Althea Glenister, M.S., Associate Professor and Research Associate; and Anna Clarke and Joan Collins who prepared the many reports.

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Chapter 1

Introduction

The recent growth and sophistication of health care, proliferation of highly specialized health disciplines, and explosion of scientific knowledge have resulted in unprecedented changes and increased complexity in the provision of optimal patient care. In order to cope with the continual change and pressure, a heirarchy of functions has been created in nursing that has moved the nurse farther away from the most vital concern of the profession—the patient. Administration, rather than patient care, has become the focus of nurses' duties.

In many hospitals, information handling by the nurse has become the major problem that prevents her from caring for the patient. Nurses deal with large volumes of patient-centered information and base important judgments and decisions about patient care on this information. The methods nurses employ in collecting, recording, and communicating information, while patterned, are not systematic.

Ritualistic methods for gathering illness or disease related data have been developed in medicine over a long period of time. These methods make the collection of medical information more adaptable to standardization and computerization.

The Current Study

In order to reduce information handling, a new type of standardized and integrated record keeping is proposed. A free flow of information between physician, nurse, and other health team members will be initiated. It is anticipated that, as a result, increased intellectual participation will be realized by the team in planning patient care. Professional nurse utilization at a level that is intellectually stimulating and challenging will not only improve the quality of patient care, but will also increase the work satisfaction of the nurse, aid in the retention of the nurse, and attract the inactive nurse back to nursing.

This study will assist in changing the traditional managerial, desk-oriented role of the professional nurse prevalent in today's hospitals and community health agencies to the new role of the nurse clinician responsible for assessing the patient's needs for care, identifying nursing therapy, and recording significant clinical data to support the processes of decision-making relative to the nursing care of the patient. It is believed that, by employing computer technology and the logic of information science, patient information will be recorded with ease and a substantial reduction in staff time, retrieval rapidity for immediate use and greater pertinence, and conciseness in format that will contribute more effectively to the planning of dynamic patient care.

The current study, designed for development of a machine-manageable and more desirable system of handling patient information, was sponsored by the School of Nursing, Faculty of Health Sciences, State University of New York at Buffalo. Financial support was provided through a contract with the Division of Nursing, Bureau of Health Manpower Education, National Institutes of Health.[1] Deane B. Taylor, R.N., M.S., Associate Professor, Associate in Clinical Nursing, School of Nursing, was the Project Director.

[1] The Division of Nursing was redesignated a component of the Bureau of Health Resources Development, Health Resources Administration, in July 1973.

Philosophy of the Study

While the role of the nurse is expanding into new clinical dimensions and increased primary patient care responsibilities, nurses continue to be deluged with administrative paperwork. The Division of Nursing, which has provided leadership in nurse training and education, was interested in supporting innovative research activities directed toward reducing nurses' clerical load and increasing the efficiency and effectiveness of patient information handling.

Nurses make diagnostic and interpretive decisions important to patient care in most phases of their professional activity. However, the rational and accurate clinical information necessary for successful decision-making in planning and implementing patient care is often not available and has yet to be specifically identified. A system of meaningful standards, terminology, and interpretation is needed. The process of collecting and communicating patient data and assessment information needs to be improved.

Previous efforts to incorporate computer technology into the field of nursing were very limited and usually concentrated prematurely on computer hardware. The need for assembling clinical patient data into a format suitable for adaptation to data processing was generally not recognized. To the writers' knowledge, efforts to convert information obtained and recorded by nurses to a computer-assisted system have not been entirely successful.

The current project concentrated on seeking the contributions of practicing nurses in identifying the descriptive clinical information nurses need in order to give excellent patient care. The essential information was then organized into nursing assessment forms adaptable to machine processing.

A computer-assisted information system designed to process patient clinical data and prescribed therapy and patient care management information could provide a desirable framework for nurse decision-making and planning. The data collection and assessment tool would require nurses to redirect and improve their patient observation skills. Nurses would need to explore, interpret, and record a wide range of significant cues and use a rational approach in assessing the health illness status of patients. The collection and assessment tool could provide source data for development of the software essential to continuous communication of sequential information retrievable from computer storage, and thereby, become a vital part of a composite information system used by all members of the health team.

Objectives

The broad objective of the project was to improve the quality of patient care through the development of a tool for assessing patient health illness status and recording essential information throughout a period of hospital or home care. The tool would be usable as a manual system or readily adaptable to a computer-assisted communication system and would be designed to:

- reduce the time nurses spend in handling information;
- provide accurate clinical data for daily patient care;
- provide uniform, easily accessible data for evaluation of nursing care, research and education, and legal matters; and
- provide, by communication of information, a continuity of care for patients transferred to another health care organization.

The specific objectives of the study were to:

- identify the information needed by nurses for decision-making and planning patient care;
- develop tools for systematically gathering, recording, and adapting these facts for an automated hospital information system; and
- design a means of communicating the information to nurses and allied health professionals in the hospital and in community health agencies.

Scope of the Work

Prior to development of the tools for patient assessment and information gathering, written and verbal communication patterns and the clinical content of nurses' notes and

patients' records at several hospitals and health agencies were reviewed. The first phase of the study focused on standardizing the clinical data of surgical patients at the study hospital (see Appendix A). In order to develop nursing assessment forms for the surgical patients, it was necessary to:

- study the present nature of nurse-patient activities in each setting involved directly in the care of adult surgical patients;
- identify the information necessary for decision-making to meet patient care needs;
- develop nursing assessment forms for collecting the machine-manageable data;
- prepare personnel on the experimental units to use the forms;
- test the forms on all patients in the experimental units;
- determine the pertinence of the collected information;
- revise and improve the forms until a usable final product was developed;
- identify the level of professional training required for proper use of the forms; and
- evaluate the effect of the developed manual information system on patient care.

The following forms were developed for use with hospitalized adult surgical patients from admission to the time of discharge:

- nursing assessment: basic patient information (social and health/illness status upon admission);
- nursing assessment: patient progress (physiological and psychological responses to illness and therapy);
- nursing assessment: recovery from anesthesia (acute physiological and psychological responses to surgery and anesthesia);
- nursing assessment: 8-hour intake and output (fluid balance and therapy, including responses of patient to therapy).

The contract was extended to a second phase for developing and testing forms for use with hospitalized adult nonsurgical patients (no obstetrical forms) and with adult patients and their families cared for by community health agency nurses. The clinical information necessary for assessment of these patients was identified and incorporated into several forms that were appropriate to the collecting and recording of patient-family data by the community health nurse. The following areas of nursing assessment were included:

- patient transfer summary—social and environmental data, health/illness status, short- and long-term health goals, and a coping index of the patient and his family indicating the skilled nursing care needs and other factors essential to the receiving nurse;
- basic patient-family information—social and environmental data, previous health/illness history, immunization data, major health problems of both the patient and family or immediate household members;
- patient physiological and psychological responses and/or reaction to illness, therapy and hospitalization, agency or home care;
- patient-family roles and activity patterns;
- patient medications (both prescribed and nonprescribed), treatments, and diet therapy; self-care deficits and patient-family needs for teaching, demonstration of therapy procedures, health guidance and counseling; and
- patient clinic therapy record including tests and results, changes in therapy as prescribed by the physician or nurse, and data for next visit (assures adequate communication between clinic and community health nurses).

The forms were evaluated and revised to assure ease of use, validity of data, and adequacy and relevance of information for decision-making and planning patient care. Manuals of instruction for each form were developed. Inservice programs were conducted to prepare personnel to use the forms. Methods of communicating patient information from hospitals to community health agencies were developed.

The final set of forms was presented to nurses and physicians for assurance of their acceptance of the forms and their understanding of the potential of computer technology in nursing education, practice, and research.

Chapter 2

Nursing Roles and Responsibilities

The future will bring considerable changes in the responsibilities, functions, and professional relationships of nurses. The increasing influence of computer technology in the nursing scheme is inevitable and will affect the manner in which the nursing role is developed and expanded. It is necessary to be aware of the past and present role of the professional nurse in order to understand the need for and potential impact of computers in nursing.

Past Role of the Nurse

Over the years, many social forces and various events from both inside and outside the nursing profession have had an impact on nurses' roles and responsibilities. Hospitals have traditionally been the predominant place of employment, and nurses have experienced the greatest changes within these institutions.

The Hospital Nurse

Most hospitals are rigid bureaucratic organizations. The hospital nurse is subjected to several concurrent lines of authority: lay-administrative, professional, and medical. Each of these groups has its own idea of nurses' duties, needs, and goals. In addition, nursing's low status within the health care system limits interaction with other professional groups. The lack of communication and a common concept of nursing has resulted in the misuse of nurses: they perform so many nonnursing functions that little time is available for patient care.

The role of a nurse and her functions and responsibilities are defined according to her position in the hospital's hierarchical structure. Although the positions vary somewhat from one institution to another, the usual hospital nursing positions are staff nurses, team leaders, head nurses, supervisors, and administrators. The staffing patterns of most hospitals include few professional staff nurses other than those who work in specialty units such as intensive care and recovery rooms. Consequently, direct patient care by registered professional nurses has sharply declined during the past two decades.(*1*)[1]

The Head Nurse

Prior to World War II, the role of the head nurse was one of direct involvement with patients, physicians, and student nurses. After the war, her role became primarily one of administration of the hospital unit, administration and coordination of patient care services and activities, and supervision of personnel.(*2*) She was overburdened with administrative and clerical tasks and, as a result, retained only minimal contact with patients and physicians and almost none with student nurses.(*3*) The head nurse was expected to exercise sound judgment, adhere to the rules of the institution, and make decisions that would result in good patient care, satisfied patients and doctors, and a contented staff. Various efforts have been taken to assist the head nurse in meeting her responsibilities.

[1] Italic numbers in parentheses apply to references listed at the end of the chapter.

Team Nursing

Developed in the late 1940's, team nursing offered a means of individualizing patient care and personnel assignments while reorganizing nursing assignments to decrease the head nurse's span of control.(4) Graduate nurses who had previously been staff nurses became team leaders and directed and worked with auxiliary personnel in caring for a group of patients. Many of these graduate nurses were not accustomed to carrying the responsibility for assigning work to others.(5) Therefore a number of educational programs were developed to prepare nurses to be team leaders.

The concept of a written nursing care plan was developed in team nursing. It has gained philosophical, but not practical, acceptance by most nurses. Little and Carnevalli(6) proposed a systematic nursing care plan is one means of offering knowledgeable, high quality nursing care when a nurse's contact with patients is limited and other personnel implement many of the nursing actions. Marlene Kramer(7) reported that one of the core problems of team nursing is divided responsibility and accountability for a group of patients. It reduces job satisfaction, patient care continuity, and assumption of responsibility. An employee experiences greater job satisfaction when he is totally responsible for a few patients.

Aid by Other Personnel

In the late 1940's and early 1950's, the number of patients increased and the shortage of nurses became acute. Initial aid to professional nurses was provided by employing practical nurses and nurses' aides. In the sixties, community college-trained technical nurses, clerks, ward secretaries, and other allied health workers came on the scene. More recently, unit managers and graduate-prepared nurse clinicians have been added to an increasing number of hospital staffs. Several of the personnel were employed in an attempt to extend the services of the hospital nurse by reassigning some of her non-nursing managerial functions.

Two of the earliest unit manager systems were developed at the University of Florida Hospital by Dean Dorothy Smith(8) and at the University of Michigan Hospital by Arlene Howe.(9) The unit manager system resulted in a new role for the head nurse and a new title such as nurse-coordinator, liaison nurse, or resource nurse. However, there was confusion about this role of the nurse, and a hierarchical administrative pattern not too different from the rejected supervisor-head nurse pattern developed.(10) In addition, even though nurses had more time to provide patient care, the quality of nursing care was still "hit or miss" due to the lack of a system of nursing practice.(11) Several questions posed in the article "Myth and Method in Nursing Practice" are expressions of the need for a system of nursing care and practice: (12)

- What system do we presently have for insuring good nursing care?
- What procedures make it mandatory for the team leader to know as much about each individual patient as is necessary to insure his care?
- What method exists for assessing patient's nursing problems and for dealing with them and for evaluating both assessment and management?

Current Role of the Nurse

Defining Professional Nursing

The definition of professional nursing and clarification of the role currently played by these nurses remain elusive. As the areas of nurse control have not been identified within the profession, existing legislation and judicial decisions have identified some of them. The first six, listed below, are independent functions of the nurse, the last is a dependent function: (13)

1. Supervision of a patient involving the whole management of care, requiring the application of principles based upon biological, physical, and social sciences;
2. Observation of symptoms and reac-

tions, including symptomatology of physical and mental conditions and needs, requiring evaluation or application of principles based upon biological, physical, and social sciences;

3. Accurate recording and reporting of facts, including evaluation of the whole care of the patient;
4. Supervision of others, except physicians, contributing to the care of the patient;
5. Application and execution of nursing procedures and technics;
6. Direction and education to secure physical and mental care;
7. Application and execution of legal orders of physicians concerning treatments and medications, with an understanding of cause and effect thereof.

Responsibility to Observe, Record and Report

One of the cited functions of nurses is and will continue to be observing, recording, and reporting essential patient information. This responsibility and the manner in which it is carried out have changed little over the years. Nurses' Notes (figure 1., page 8), the form in which the major portion of patient information is recorded and transmitted, are not totally satisfactory. They consume a considerable portion of nurses' professional time, certain information that usually has not been gathered in a systematic manner(*14*), and are often incomplete, noninformative and irrelevant to the actual state of the patient.(*15, 16, 17*)

Jydstrup and Gross(*18*) reported in "Cost of Information Handling" that nursing entailed the most information handling in all three study hospitals, and that nurses' notes were the single most time consuming written communication. Increased nursing skill was accompanied by increased information handling. The average time spent in information handling was 7 percent by a nursing aide, 22 percent by a practical nurse, 36 percent by a registered nurse, and 58 percent by a head nurse.

New standards developed by the Joint Commission of Accreditation of Hospitals include five standards for nursing service.(*19*) Three contain some reference to nurses' responsibility to observe, report, and record information. They require that nurses develop brief pertinent written nursing care plans for each patient in order to provide safe, efficient, and therapeutically effective nursing care. This record must reflect the patient's progress and be significant, accurate, and concise. Nursing care policies and procedures are to be charted. Patient needs are to be evaluated as a means of determining the number of registered nurses and ancillary nursing personnel needed for each nursing care unit.

Need for a Data System

One of the difficulties nurses face in attempts to provide meaningful written information is stated by Faye McCain: (*20*) "Nursing as it is taught and practiced today is primarily intuitive. Nursing has not developed a precise method of determining when nursing intervention is needed. However, the need for a precise method has been recognized."

The results of a study by Kelly and Hammond support the concept that nurses do not systematically gather information. Neither a single cue nor groups of cues, arranged in various ways, were found to be related to the inferences made by the nurse-subjects about the state of the patient.(*14*) The kinds of information nurses need to make decisions in planning and implementing nursing care, and the patient cues that determine nursing action have yet to be identified.

Lawrence L. Weed notes in his discussion of medical records(*21, 22*) that order is conducive to quality, that the quality of care can not be assessed if adequate records are not kept, and that failure to keep accurate, up-to-date records is a form of secrecy that keeps knowledge of the art from spreading.

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Figure 1.—Example of standard nurses' notes

NURSES NOTES

Date Hour	Treatments	Hour	Observations
			DEC 18 1969
		6 am	Apparently Slept at long intervals. C. [redacted] R.N.
	up in chair during		linen change.
	up and about room		as desired.
		2 pm	Resting quietly
2-11	Ambulated ad lib.	10 pm	Has small spot old red D. [redacted], R.N
			drainage on dressing on right thigh.
			Chest dressing dry. States she still has
			a toothache on Rt side. Resting quietly
			doesn't speak much G. [redacted] L.P.N.
			DEC 19 1969
		6 am	Apparently Slept at long intervals.
			C. Krawcich P.N.
		9 am	Ate pain. Doesn't make much Conversation.
	Up in chair.	2 pm	States "She pulled the dressings off of
			her leg". G. [redacted], N.A.

NURSING ROLES AND RESPONSIBILITIES

Changing Role of the Nurse

Two current trends in nursing, cited by Brown in "Nursing Reconsidered,"(*23*) are:

- Removal of nonnursing functions from staff nurses, head nurses, and supervisors, and emphasizing the return of the graduate nurse to direct patient care;
- Increased use of electronic data processing in information handling and pioneering efforts in the application of the system to communications in the health fields.

Social changes and advances in the biological and behavioral sciences and in medical therapy and technology have necessitated increased inservice education for staff in hospitals as well as curriculum changes in many schools of nursing. There has been increased emphasis on graduate level programs to prepare nurse clinicians for both nursing practice and nursing facilities. A change in the delivery of health care is called for in view of the rising costs of illness and misutilization of hospitals. The focus in health care is shifting from illness to health maintenance and is accompanied by increased employment of nursing personnel in non-hospital health facilities. Lysaught stated, "the hospital nurse, important as she is to the care of the acutely ill, represents only one segment of a full health service plan."(*24*) These developments plus other forces demand a new role for the nurse in hospitals and other health agencies and institutions.

Lysaught suggests two general practice fields for the provision of health care: episodic care and distributive care. Episodic care is the nursing practice that is essentially curative and restorative, generally acute or chronic in nature, and most frequently provided in the setting of hospital or other in-patient facility. Distributive care is the nursing practice that is essentially health maintenance and disease prevention, generally continuous in nature, seldom acute, and increasingly takes place in community or emergency institutional settings.(*25*)

Responsibilities of Nurses in Episodic Care

The nursing process has become much more sophisticated. Tasks have increased in number and complexity and have been expanded to include such skills as problem-solving, interviewing and interpersonal relationships. Nursing tasks identified in the report of the National Commission for the Study of Nursing and Nursing Education include: (*26*)

- Assessment [1] (observation, interpretation and evaluation)
- Intervention (direct or indirect prescriptions)
- Instruction (patient, family, health workers)

These responsibilities stress the nurse's cognitive and intellectual as well as her technical capabilities. The nurse is expected to make judgments about patient state and nursing needs and to determine the action to be taken in order to give optimum benefit to the patient.

Specialization.—Although ever a part of nursing, specialization has increased rapidly in breadth and depth. Increased knowledge and more complex medical treatment have necessitated specialization for the nurse therapist in psychiatric nursing, the care of premature babies in maternal and child health units, the care of the patient with cardiac disease in medical nursing and intensive care units, and the critically ill. In many areas of nurse specialization, the roles and responsibilities of nurse, physicians, and other health workers are congruent. Unfortunately, this is not so in other phases of hospital nursing.

Innovative Practices.—Programs at Good Samaritan Hospital in Phoenix, Arizona, Latter Day Saints Hospital in Salt Lake City, Utah, the Loeb Center, Montefiore Hospital in New York City, New York, and St. Vincents Hospital in Portland, Oregon, are

[1] Nursing assessment, as referred to in the current study, is the diagnostic process of critical thought and decision-making. It is a continuous, systematic, critical, orderly, and precise method of collecting, validating, analyzing, and interpreting information about the physical, psychological, and social needs of a patient and his family, the nature of the patient's self-care deficits, and other factors influencing his condition and care.

among those that have made major contributions to innovative nursing service programs.

The new program at St. Vincents Hospital provides the framework for collaboration between nursing services and nursing education and is being developed by Ruth Wiens. The associate director in charge of nursing services is responsible for nursing care and delegates responsibility for patient care to unit directors or nurse clinicians in the areas of medical nursing, surgical nursing, operating room and recovery room, maternal and child health, orthopedic nursing, and cardiology. The associate director in charge of nursing education is responsible for inservice education of staff and coordination of the student activities from the various nursing schools that utilize St. Vincents Hospital for their clinical experiences.

Clinical Specialists.—Many efforts have been made to identify the role and responsibilities of the clinical specialists and to clarify her position in the hospital organization. Johnson, Wilcox, and Moidel *(27)* describe the clinical specialist as a practitioner and note the differences between her practice and that of the staff nurse. Ramphal(*28*) describes the need for supervisors to be expert clinicians. Georgopoulos and Christman(*29*) developed a role model for the clinical nurse specialist. There is considerable agreement that the clinical nurse specialist should be adept at assessing and evaluating patients' needs and should have the autonomy to implement care and assume responsibility for the quality of nursing care.

Responsibilities of Nurses in Distributive Care

Community health services have been a part of the nursing scene for the last 50 years. The services are delivered by county or State public health organizations or by the voluntary agencies commonly called visiting nurses associations. In recent years, many new services which call for an expanded role of the nurse have been added. They include mental health centers, neighborhood clinics, rehabilitation centers, and, more recently, expanded care facilities, institutions for the chronically ill and the aged, and drug and alcoholic treatment centers or clinics. New services are established in response to the needs of society.

Three programs in distributive care that are gaining momentum and acceptance are prenatal and infant supervision, the pediatric nurse practitioner, and the nurse midwife.

Prenatal and Infant Supervision.—Seacot and Schlachter studied the expanded nursing role in prenatal and infant care.(*30*) Nurses participated in four aspects of care: identification of problems, evaluation of those problems, direct nursing care, and health education. Nurses' services were being used for the full range of physical and psychological problems: self care during pregnancy and preparation for hospitalization, self care after delivery, well baby care, care of a sick infant, family problems, and family planning. The success of the program was attributed to the fact that nurses and physicians were working together as a team.

Pediatric Nurse Practitioner.—The ability to assess the patient's needs, exercise professional judgment, and take action is basic to an expanded role of these nurse practitioners. The American Nurses' Association, Division of Maternal and Child Health Nursing Practice, and the American Academy of Pediatrics issued the following joint statement concerning the responsibilities of the pediatric nurse associate:

> The expansion of the nurse's responsibilities would encompass some of the areas that have traditionally been performed by physicians. Proficiency and competence in performing these new technical skills associated with the expanded responsibility should be viewed as increasing the sources from which the nurse gathers data for making nursing assessment as a basis for diagnosis and action and thus contributes directly to comprehensive nursing. Nurses must therefore be prepared to accept responsibility and accountability for the performance of these acts and must have the opportunity to be engaged in independent as well as cooperative decision-making.(*31*)

Nurse Midwife.—A joint statement of the American College of Obstetricians and Gynecologists and the American College of Nurse Midwives notes ". . . in medically directed

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teams, qualified nurse-midwives may assume responsibility for the complete care and management of uncomplicated maternity patients."(32) This statement paves the way for expanded use of the nurse midwife in the United States. Many other countries have successfully utilized nurses in this capacity for years.

Recommendations for the Future of Nursing

A number of recommendations for the future of nursing have been implied in the reviewed literature and in discussions of the current and changing nursing scene. In addition, in 1967, Dr. William H. Stewart, then Surgeon General of the U.S. Public Health Service, made several recommendations and statements regarding the future of nursing: (33)

- "Nursing must take the lead in solving the problems the profession faces today, but should involve others that are concerned. No single group is more important to the day-in, day-out delivery of health care . . . none of the health professions is at a more critical moment in its development than nursing."
- A universal definition of nursing is needed. At the current time, "the hospital administrator, the physician, the nurse and the patient each have their own perception of nursing."
- Nurses are deluged with paperwork, supervision and training duties for the many layers of assistants who function between them and the people who need care. In addition, because nursing services operate 24 hours a day, 365 days a year, professional nurses are frequently called upon to absorb the responsibilities of other health workers who work the conventional hours. At various times nurses substitute for physicians, anesthetists, hospital administrators, dietitians, lab technicians and scrub women.
- Nurses and physicians must learn to share responsibilities as partners in the hospital situation as well as in community health.
- Salaries should improve. The increases may assist in differentiating the skills of the various levels of nursing personnel.

Dr. Stewart's recommendations in the area of nursing education stressed the need for:

- the nursing profession to take the lead in identifying the various levels of nursing,
- career ladders to permit mobility,
- closer alignment in education for all health occupations,
- medical and nursing students to share some courses so they may begin to act as a team and share responsibility for patient care, and
- definition of those nursing skills that require so-called professional education.

More recently, several recommendations were made by the National Commission for the Study of Nursing and Nursing Education: (34)

- Development of a greater knowledge base by increased research into the practice of nursing and education of nurses,

  > It is not sufficient that nurses act or refrain from acting on the basis of intuition . . . there must be strong commitment to the systematic study of nursing practice in terms of objective criteria. This research will permit us to make scientific judgments about those things that nurses do that make a difference and also to discover new things they could do that would further enhance patient condition, recovery and rehabilitation.

- Improved educational systems and curricula based on the results of that research,
- Clarification of roles and practices conjointly with other health professionals to ensure the delivery of optimum care,

- Increased financial support for nurses and for nursing to ensure adequate career opportunities that will attract and retain the number of individuals required for quality health care in the coming years.

An Information System

This review of the past, the changing present, and the possible future roles and responsibilities of nurses has been made in order to demonstrate the need for development of an improved system of collecting and recording patient-family information.

The current research project stresses this need and provides a tool for systematic assessment of patient health illness status upon admission to the hospital and throughout hospitalization, transfer, and followup care in the community. In addition, the tool will aid nurses in providing optimum patient care through improved information assessment and communication and an eventual reduction in the time spent in information handling.

Dean Smith noted(35) that it may well be that the science of communication is more pertinent to nursing than the science of disease or pathology. If this is true, we need to systematize other members of the health team, and, of course, between nursing personnel and patients. Concurrently, the nurse must be assisted in focusing on patient care and in reaping some satisfaction and rewards from so doing.

It is apparent that many nurses are not only concerned about the future of nursing, but are committed to trying innovative practices. As Lysaught concluded: "Nursing must take the opportunity to capitalize on the recommendations made and emerge as a full profession, dedicated and capable. Any less achievement will represent less than optimum health care for all Americans. Reveille sounds not for nursing alone, but for all those who want American society to enjoy the promise of the best health care, sensitively and humanely dispensed." *(36)*

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Chapter 3

Computer Technology In Hospitals and Health Care Institutions

Background

The current inefficient methods of processing data related to clinical care of patients, nursing services and hospital administration are fertile fields for computer technology. Since the early 1950's, interest in the application of computer technology and the concepts of cybernetics to information handling and the care of patients in the hospital has accelerated rapidly. Many of the applications developed for management functions in business and industry were believed applicable to the management of health facilities.

In 1962, several papers on computer applications in health care were presented by nurses at the American Nurses' Convention in Detroit, Michigan. A monograph titled "Technical Innovations in Health Care: Nursing Implications" included a provocative and future-oriented paper by Hildegard E. Peplau.(*1*) This nonclinical paper was requested in recognition of the importance, urgency, and scope of the impact of automation upon the clinical practice of nursing and, therefore, upon the general health and welfare of people. Dr. Peplau's article indicated that nursing leaders and many nurses were aware that automation and technology would affect nursing, nurses, the delivery of health care and, above all, patients' and families' health. Dr. Peplau identified areas of nursing concern and responsibility in the delivery of a computer-assisted health care system.

Computer Applications in Hospitals—1968

Electronic data processing equipment was first introduced into the hospital environment in the business offices for administrative and clerical activities, such as accounts payable and receivable and payroll and insurance records. Manufacturers of computer hardware were interested in developing additional applications within hospitals and had taken the lead in efforts to develop hospital information systems.

Health care computer-assisted information systems were primarily developmental in 1968 when this research project was initiated. In order to place the reported project in perspective with then current computer applications, a brief description of those more directly related to nursing is given.

Monmouth Medical Center, Long Branch, New Jersey (*2*)

The medical information system at this institution was used to process business applications, laboratory data, patient admission and discharge information, ordering and recording of patient medications, and requests for X-rays, dietary orders and other services. To facilitate the operation, teletypewriter terminals were installed at each nursing unit and in all service departments of the hospital.

The system relieved the nurse of a great number of clerical tasks and improved communications between nursing units and various service departments of the hospital. Traditional hospital records and communication methods were also maintained during the test period, so double recording of patient information by the nurses was required.

The director of nursing service, Mrs. Jean Sacci, stressed that "the nurses would be responsible for the input, verification of all source data, and retrieval of patient information processed by the system."

Children's Hospital, Akron, Ohio (*3*)

The nursing staff has worked for a number of years to develop a data processing system which would include nurses' notes. The primary objective was to relieve the nurse of the many clerical tasks for which she is usually responsible. Charles Campbell was very enthusiastic about what had been accomplished and believed that a great deal more could be done to relieve the nurses of paperwork if the hospital had an on-line computer system.

Charlotte Memorial General Hospital, Charlotte, North Carolina (*4*)

The hospital's "Burroughs Medi-Data, Inc." system is a time-shared service facility initiated in 1966 to provide on-line service to three general hospitals in Charlotte and one in Greenville, South Carolina. Don Clark and Associates, a systems consultant company, developed the system design and determined the hardware needed to provide computer capabilities for the applications being developed. The hardware was in the process of being installed in 1968.

Mrs. Elinor Leonard, R.N., M.S., served as the Nursing Coordinator for the project. Initially, a Nursing Service Application Team designed a system applicable to nursing activities and a second team designed a system for all services of the hospital. Hospital administration, nursing personnel, and systems staff worked together to develop the initial applications. The programs were designed to relieve the nurse of many clerical and nonnursing administrative tasks and of all paper work associated with information handling. Pilot testing of the system was to be done at the Charlotte Memorial General Hospital.

This project directly involved all of the nursing staff. Several nurses from each of the four hospitals volunteered to serve on working committees. Nurse Systems Analysts from three hospitals coordinated committee activities, and Mrs. Leonard served as overall coordinator. These nurses have accomplished the almost impossible task of reaching a consensus on the standard sets of patient care instruction for over 200 procedures identified as the "Components of Care."

Systems personnel have coded and programed for computer processing and retrieval the components of nursing that, as determined by the nurse, best meet the needs of each patient. Nurses are not to be responsible for data input; therefore, a large staff of nonnursing clerical personnel (mostly former ward clerks) were being trained as "Data Processing Technicians." Additional staff will be needed in order to provide coverage when the total system becomes operational.

The components of nursing care will be printed out by the computer prior to each change of shift. When a medication or treatment has been administered, the nurse will initial the time column "x" on the same line as the item. A record of patient care will be maintained by the computer.

Following installation of the terminals, applications developed by the service design team will be implemented. In addition, computer applications for admission data and many hospital administrative procedures, such as accounting, patient billing, and statistical reports, will be implemented. Nursing data and nursing care plans will be added at a later date. Future plans include the development of a variety of applications to be processed by the large on-line system.

San José Community Hospital, San José, California (*5*)

The nursing staff, encouraged and sup-

ported by the hospital administrator, has developed a method for utilizing data processing equipment in recording "Nurses' Observations." Standard descriptive terms were selected from those recorded by nurses in traditional nurses' notes in medical-surgical, pediatric, and obstetrical units of the hospital. A minimum number of terms was selected for each set. One set was used for each patient during each shift. Nurses marked the applicable terms on mark-sense carbonized paper forms. Data processing equipment was used to "read" the information and keypunch the data onto IBM cards. A high-speed line printer transcribed the information to a narrative format on $8\frac{1}{2}$" x 11" paper which then replaced the check list copy in the patient's medical record.

Nurses identified the advantages of this system as: (1) the ease of recording routine observations on machine printed forms, (2) the ease of reading the information, (3) the increase in nursing content on the form, and (4) the improvement in communications about patients to other nurses and to physicians. One severe disadvantage of the system was the amount of paper that accumulated in each patient's chart.

Camarillo State Hospital, Camarillo, California (*6*)

Data processing techniques have been applied in the interest of improving communication of patient data among mental health institutions and clinics throughout the State. Due to a large mobile population, patients' psychiatric records frequently needed to be transferred from one agency to another. However, patients often could not remember where or when they had been previously treated.

A master file of all patients cared for by any State mental health facility was established. Each patient was assigned a code number which was recorded in the on-line master file. Following a patient's discharge, a treatment summary is prepared and data is keypunched onto IBM cards by clerical staff in the medical records department. Summarized discharge data from previous treatments throughout the State are then available to health personnel continuing with care of the patient at any of the State mental health facilities.

The Institute for Living, Hartford, Connecticut (*7*)

Automated nurses' notes have been processed at the Institute for a number of years. Rosenburg *et al.* report:

> The use of automated nursing notes has resulted in numerous advantages .... The structured demand for information promotes improved reporting of patient terminology which personnel can utilize in a meaningful way. The content, because it is standardized and is retained in format acceptable to the computer, is available for statistical analyses in ways inconceivable with the usual narrative notes.

Analysis of the terms and phrases describing patient behavior, mood, affect, socialization, and other factors recorded by the nurse have proven to be very helpful in predicting patient behavior on the ward.

Roswell Park Institute, Buffalo, New York (*8*)

A large computer research study designed to automate nurses' notes was in progress at the Institute. Marlene Slawson, R.N., and Sandra Ulrich, R.N., were preparing nursing applications for the system and instructing nursing personnel on their use.

A structured set of terms was organized. The nurses on each shift completed the prepared forms by selecting those terms which best described a patient's skin, throat, wound, etc. Carbon copies of the forms were collected and forwarded to the computer center where the information was keypunched on IBM 80-column cards. The printout of nurses' notes was placed in individual patient charts by nursing unit personnel.

A "Nurses' Admission Form" was also processed. Patients' temperature, pulse, and respiration (TPR) were recorded on Port-A-Punch cards in a wall bracket mounted in each patient's room. TPR values could be recorded as frequently as every 4 hours. A cummulative graph was printed out every 24 hours and placed in the patient's chart as a 24-hour report.

Reactions of the medical and nonmedical staff to these computer applications ranged from approval to general dislike. The staff believed that several system changes and improvements would result in more favorable attitudes and that adequate teaching and orientation of all staff would decrease negative feelings and reduce the number of errors made in punching cards.(*9*)

Johns Hopkins University, Baltimore, Maryland (*10–13*)

Dr. Charles Flagle of the University is perhaps one of the best known researchers applying the techniques of industrial engineering and operations research to solving problems related to working conditions, manpower utilization, and delivery of supplies and equipment in a large hospital.

In one study, a computer was utilized for nurse scheduling and staffing. Dr. Flagle, members of the research team, and supervisory nurses developed a method of classifying patients according to several tasks or procedures involved in their care.(*14–15*) The supervisors found data input on the teletypewriter terminal more time consuming than doing the task manually. It would have been advantageous to have clerical staff handle data input, but hiring and training were not feasible at that time.

Massachusetts General Hospital, Boston, Massachusetts (*16–20*)

Probably one of the most ambitious projects was in progress at this hospital. G. Octo Barnett, M.D., principal investigator for the project worked with a staff of physicians, pharmacists, pathologists, computer specialist, industrial and methods engineers, clinical researchers, and nurses.

A system to record admission data and laboratory test findings had been developed for use on the 10-bed research unit. In addition, a very sophisticated method of recording and processing medication orders was implemented. Nurses used interaction type teletypewriters for processing all patient orders related to these programs.

Another study was designed to investigate the possibility of using computers in planning staffing patterns by identifying patients' needs for care and weighing the variables involved. A realistic and practical computer program that would relieve nurses of this nonnursing, time-consuming task possibly could then be developed.(*21*)

Nonnursing Computer Applications

Many of the pioneering efforts in computer applications for medical and laboratory practices were not directly related to nursing but did have considerable impact on the development of nursing applications designed to reduce paper work. These activities tended to be systems, rather than patient, oriented. A few of the better known were:

University of Missouri, Columbus, Missouri(*22*)—For a number of years, Donald Lindberg, M.D., and others have worked on a method of processing laboratory data. The aim is to assist physicians in diagnosing patients' illnesses by establishing reliable test values and their "normal" parameters for various laboratory tests.

Tulane University, New Orleans, Louisiana(*23*)—Joseph Balintfy and others developed a sophisticated hospital dietary system which provided data on cost per serving and market cost of foods as of that day. Foods that provided optimum nutrition were identified. Food color, eye appeal, calories, vitamins, sodium content, consistency of foods, and other variables were noted in order to assist the dietitian in planning menus.

The Peter Bent Brigham Hospital Clinics, Boston, Massachusetts(*24*)—The research team was involved in designing a computer-assisted clinic appointment system. The objective was to improve the care of clinic patients by: (1) reducing the intolerable waiting time of patients who were all instructed to come in at 8:00 a.m., (2) better utilization of the limited clinic facilities, and (3) scheduling the physician's time in a more efficient way.

Status in 1968—Summary

In most hospitals, 1968 applications of computer technology were limited to accounting functions. This limited application is due in part to the considerable success achieved by

industry in using the computer in financial activities, the ease of identifying monetary benefits and the relative difficulty of identifying nonmonetary benefits of computers, and the conservative nature of most hospital administrators.(25)

Researchers at some hospitals were investigating methods of computer application of nursing data. The applications were primarily departmental or service oriented. Programed instructions for the input of data generated by specific departments, including clinical laboratory, X-ray, dietary services, pharmacy, or admissions, were being developed.

Other researchers were seeking solutions to processing the large volume of information about patients. In a few instances, the information in "Nurses Notes" was being studied for computer application.

Computers in Health Care Institutions—1971

During the 3 years of this study, there was a considerable increase in the use of computers in hospitals and other health care instituions. In 1971, computer applications in hospitals were still primarily limited to accounting or managerial functions. The success of these systems accounts, to a certain degree, for the current number of installations in hospitals. The 1972 estimate of over 3,000 medical computers installed in hospitals becomes quite impressive when one realizes that in 1957 the *first* hospital-based computer was installed in Memphis, Tennessee, and in 1961, there were fewer than 10 hospital systems. In addition to the 3,000 hospital computers, many laboratories and doctors' clinics have access to computers via communication lines and terminals. These "shared systems" have become increasingly popular within the past few years and further emphasize the fact that nurses will continue to face the necessity of working with computers.

Many of the social, economic, and legislative factors which have resulted in changes in the delivery of health care systems and in changes in the role of the professional nurse have been discussed. Some of the major factors which have contributed directly to the increased utilization of computers in hospitals have been identified by Atkinson: (*26*)

1. A greater reliance by the physician on more objective data resulting in substantially increased workloads in both medical and administrative data,
2. A tremendous shortage of professional and technical personnel,
3. A need for fast communication both within the hospital (between nursing stations and service areas) and outside the hospital (for fast reporting of test procedures to physicians).

The combination of these three factors creates the classic environment for automation: increased work with limited qualified personnel.

During the last decade, nursing and hospital journals have published many articles describing implications for and applications of computers in the delivery of health care in institutions and other agencies. As of 1971, uses of computers in hospitals include:

- automation of laboratory procedures from requisition through reporting of the patient test summary,(*27*)
- Patient monitoring,(*28*)
- EKG Measurement Analysis Programs: telephone lines leading directly from instruments in remote communities to computers in large metropolitan medical centers which enable doctors and nurses outside the medical centers to use the equipment,(*29*)
- automated nurse staffing and scheduling, (*30*)
- personnel profiles, (*31*)
- patient medication profiles, (*32*)
- automated patient histories with patients interacting with the terminal,
- food management systems, (*33*)
- medication systems that alert doctors and nurses to patient allergies and drug reaction symptoms, drug incompatibilities, automatic stop orders for certain drugs, and medications-to-be-

administered worksheets printed at each nursing station;(*34*)

- preventive maintenance schedule notices,(*35*)
- housekeeping and other departmental worksheets based on patient movement and scheduled activities such as surgery, X-ray, radiology, laboratory tests, therapy, dietary lists, preadmission patient scheduling, and clinic appointment scheduling.(*36–39*)

Letter of Inquiry

In an effort to determine precisely what changes had occurred in the 3-year period of the current study, the project staff sent a letter of inquiry to 66 institutions and nurses believed to be involved in the application of computer technology to health care. The letter included a request for information and for names of nurses currently serving as nurse coordinators or committee members in the development of nursing applications for computer-assisted information systems.

Twenty-seven of the 41 nurses who responded were at institutions where nurses have been assigned to serve as coordinators or liaisons between nursing personnel and computer systems staff in the development of computer applications. Many of the nurse respondents were responsible for preparing other nurses to accept and use the computer systems. Most were also members of interdisciplinary committees responsible for planning system applications, determining the kinds of information needed by nurses, and deciding if nurses should be responsible for obtaining the data and/or recording it via the terminals.

Most of the nurses forwarded materials, examples or summaries of their current activities, and their institution's plans for applications. Many included reprints of published articles or cited references.

Fourteen of those who responded to the letter of inquiry serve at institutions where nurses have not been assigned to the nurse coordinator or liaison position and no nursing applications have been developed. Several nurses indicated that development of nursing applications would be a part of future plans for their institution's on-line system.

Specific Computer Applications

Information received from nurses contacted through the letters of inquiry and from the published literature are reviewed below. The review offers some answers to the following questions pertaining to the "state of the art" in 1971 and to advances in computer applications between 1968 and 1971.

- How much progress has been made in implementing on-line, real-time information systems?
- Do these systems markedly reduce the amount of paper work and time spent by the professional nurse in information handling?
- Are more nurses now involved in this field? If so, what responsibilities do they have in the development of nursing applications?
- Are most of the systems physician, management, service, or research oriented, or are they *patient* oriented?
- Are the applications related more to the management of patient care than to patient care and the response of patients to care?
- Is there a functional system that is capable of processing clinical patient data obtained by nurses, physicians, social workers, pathologists, radiologists, and other health professionals?
- Are applications implemented at this time or are they primarily being planned and developed for the future?
- What are some of the factors that retard the implementation of developed on-line systems?

University of Rochester and Highland Hospital, Rochester, New York (*40*)

Several prestructured forms are being used as a charting system in the group practice project designed to analyze data obtained for medical research in a family practice clinic. A family or household folder carries the surname of the main family in the household, the forenames of all the people

living there, and the census tract number. Each patient's chart is filed in the family folder. Dr. Eugene S. Farley, Jr., Project Director of the University's Family Medicine Program noted:

> . . . this same chart is used by our health assistants, nurses, and doctors or anyone else . . . It is easily adaptable to computerization, although at the moment we are emphasizing manual methods that allow its use anywhere, anytime with no special funds but allow easy conversion to computers if and when funds are available to the practicing doctor for such on a permanent basis.

Although several of the forms are highly structured, considerable free write-in information would be necessary. The forms contain limited nursing data; however, much of the information would be helpful to the nurse as well as to the physician.

School of Engineering, University of Massachusetts, Boston, Massachusetts (*41*)

A model amenable to computer programing was developed for calculating the traveling time and distance required by nurses in each of the hospital's patient unit designs. The design factors will be evaluated in planning for a new hospital facility. Stanley Lippert, Project Director, stated:

> It has been estimated that travel on the nursing unit may occupy one-sixth of a nurse's time . . . a floor plan based on travel to the nurses' station, the patients' bedside, and the utility room (in any order or direction) controls the travel efficiency of a nursing unit. Travel between these three kinds of places can be readily calculated if three constants are calculated.

Walter Reed General Hospital, Washington, D.C. (*42*)

The Department of Psychiatry and Neurology at Walter Reed General Hospital is one of several mental health organizations using prestructured forms. The department has an active computer program titled "Computer Support in Military Psychiatry" (COMPSY). Captain Waltraut Hurd, ANC, computer nursing project officer, stated in a letter:

> This program was begun in 1968 and a nursing observation component was added soon thereupon. The COMPSY group has ongoing projects in psychiatry, psychology, nursing, social work, teaching and research. The nursing department project is involved clinically with various demographic lists, with a current Ward Atmosphere Scales Testing study, and primarily with a Compsy Behavioral Observation Sheet, (CPBO). These are used only as adjunct material in selected cases and traditional charting is used on all of the wards.

The CPBO's are only marginally successful because the information is not very useful to nurses on a day to day basis. The criticisms and suggestions of the nursing staff will be the basis for the scheduled revision of the CPBO form.

Missouri Division of Mental Health, Missouri Institute of Psychiatry, St. Louis, Missouri (*43*)

The Missouri State Mental Health Department is using the computer to analyze inpatients' behavior. A prestructured form of 89 items is coded so that the frequency of the observed behavior can be noted. Patient progress and disposition plans are recorded. Narrative notes may be written to support or explain certain items or additional behaviors.

Dr. Richard Evenson indicated that current programing includes: instruments for treatment checklist, community adjustment profile, geriatric behavior scale, alcoholism questionnaire, and several children's scales. An article by Ulett and Sletten, "A Statewide Electronic Data-Processing System,"(*44*) describes this Missouri system and notes that "it will handle clinical and administrative data for all of the Missouri Mental Health Hospitals. When complete, the system will serve 10 facilities, 8,000 employees, 12,000 resident patients, 8,000 annual new admissions, and 10,000 outpatient contacts a year."

Persistent problems in this State mental

hospital system were identified by Ulett and Sletten:

> Communications both in and between hospitals are slow, frustrating, and expensive. Wrong tests are done because handwritten notes are often illegible. Various departments maintain special patient files that are not available to people outside the department. Patient record-keeping reflects long-term custodial care rather than rapid treatment techniques and is antiquated and useless. Detailed, unorganized, and bulky medical records work to the detriment of patient care: it is hard to extract the specific information needed. . . . Both administrative and clinical departments of hospitals bulge with files, forms, reports, and pieces of paper whose use no one knows, but that no one dares throw away.

Many of the advantages to be realized from the currently operating program were also described:

> Communication will be improved when patient data are gathered and reported on standard forms and stored in computers where they can be rapidly and precisely retrieved. As psychiatrists and other professionals develop check lists for reporting, they will have to use similar terms for similar conditions. That will reduce idiosyncratic jargon and lead to the creation of a simple, objective terminology more readily understood by everyone concerned. Finally, through the use of computer terminals, information can be received almost instantaneously, no matter how far away it may be stored.

A mockup of a computer printout was included in the materials from Dr. Evenson. Critical items are summarized in narrative statements under several categories recorded by a nurse on the Inpatient Behavior Scale:

POSSIBLE DANGER TO SELF OR OTHERS
THREATENS TO HURT OTHERS. BREAKS WARD PROPERTY.

POSSIBLE MEDICATION SIDE EFFECTS
MILD TREMORS, DRY MOUTH, OCCASIONALLY DROWSY.

SIGNIFICANT WARD MANAGEMENT PROBLEMS
SHOUTS AND YELLS. BULLIES OTHER PATIENTS.

PATIENT PROGRESS.
PROGRESS SEEMS SLOW. DOES NOT SEEM ABLE TO LEAVE HOSPITAL NOW.

Institute for Living, Hartford, Connecticut (*45*)

"Automated Nurses' Notes" are still being used on a daily basis throughout the hospital as the method of recording nursing observations. Research nurse, Laverne Beatty, noted:

> This method of charting has enabled personnel to write a concise and legible report describing accurately each patient's behavior. It has also served as a teaching instrument, enhancing the staff member's awareness of observation and recording. In addition, it has provided a means for graphically displaying the behavior of each patient, showing specific areas of improvement or deterioration.

Prestructured, mark-sense forms are also used on admission and whenever changes in behavior necessitate updating the record. Future plans include development of automated forms for nurses' time scheduling and nursing care plans.

One of the currently operational forms, the "Minnesota-Hartford Personality Assay, Nurse's Sub-Set Male," is a four-part foldout form arranged so that the answer sheet that is "read" by the computer can be detached from the sets of questions or observations about the patient. A similar form is used for women patients. A computer analysis of patient responses is made, and the nurse receives a graphic display and narrative printout describing the patient's behavior. The nursing subsets have proven to be useful instruments for evaluating patients' behavior on admission.

Charlotte Memorial General Hospital, Charlotte, North Carolina (*46*)

The Burroughs Medi-Data, Inc. system, with a large component designed specifically by and for nurses, was described earlier. Since 1968, the applications have progressed from early planning and pilot testing stages to implementation of the nursing and physi-

cians' orders, nursing care plans, or scheduling, laboratory data, dietary data, admission and census data, etc.

Every 8 hours a computer-printed nursing care plan is prepared for each patient. The plan includes all current physicians' and nurses' orders for medication, tests, treatments and nursing care to be administered by the oncoming nursing personnel.

Three copies of the care plan are printed: one copy is used for concurrent charting as care is given and becomes a part of the patient's permanent medical record; one copy serves as a guide to the person assigned to care for the patient; and, one copy is kept at the nurse's desk as a reference for the team leader, head nurse and physician. As new orders are written by the physician or nurse, they are entered by terminal operators.

The terminals are composed of an electronic keyboard and screen (cathode-ray tube). Each service department is notified of new orders and the nursing care plan is updated. If an order is started or discontinued during a shift, an addendum is printed at the nursing station as well as at the appropriate service department terminal.

New orders or discontinued therapy are added or deleted on the 8-hour update summary. Automatic stop orders for certain antibiotics and drugs and for all narcotics have been established by the nursing and medical staffs. Unless reordered by the physician, these medication orders do not appear on the next printout.

Nurses' orders are based on data obtained from a review of the physician's orders, completion of a patient admission assessment form and information obtained by the nurse from the patient and other sources. The "Admission Data" and "Nursing Order" forms are part of the patient's paper chart. The nursing and medical orders are part of the computer record. A hard copy printout is filed in the traditional type Medical Record.

The nursing orders for each component of care are coded so that a "macro" generated a list of predefined nursing actions or "micros" to be carried out by personnel in order to achieve the nursing goals. The determination and preparation of over 200 "Components of Care" for computer processing have been described. (47)

In the example of a shift printout (figure 2, p. 24), the code number A02 is a "macro". The items listed below following the letters, A, B, C, etc. refer to the "micros." The nursing orders may be specified as to time or may be left to the judgment of the nurse, as are physician's P.R.N. orders. The continental time system is used, and an "x" in the time column indicates when care or medication is to be administered. When the medication or treatment has been given, the nurse initials by the "x" and the terminal operator then processes the data.

In discussing advantages, disadvantages, and attitudes of nursing personnel toward the system, Mr. Eugene Smith, Director of Nursing Service, stated: (48)

> I cannot document this, but the amount of paper work and information handling by nurses have really decreased. Telephone calls are markedly diminished. The attitudes of the nurses, for the most part, are very positive. There are a few minor problems, one of which is the six copies of the Nursing Care Plans generated by the computer every 24 hours. Another problem is the lack of data related to the response of the patient to therapy and nursing observations which describe the patient's current condition, which we are trying to resolve.

Mr. Smith further noted, "the nurses from the beginning have been involved in the development of the design of the system applications. It is their system, it was designed for them and by them. The nurses wanted it to work and so it does."

When questioned about the cost of the system, Mr. Smith replied: "I really can't answer your question as I don't have that information; however, I will say the same to you as I do to many others, we can't afford *not to have computer-assisted information systems in hospitals today.*"

Dynamic leadership, strong support by nursing and hospital administration, and committed systems personnel helped create this successful program. Many millions of dollars, as well as hundreds of manhours of programing time, have been invested (during

the past 6 years) in debugging and implementing the system applications. The system would not have been possible without the cooperation and support of everyone involved. The system is not static. Nurses and the computer staff are continuously improving the operating applications and planning new and innovative approaches for the future.

The University of Vermont Medical Center, Burlington, Vermont

Several respondents to the letter of inquiry expressed interest in the "Problem Ori-

Figure 2.—Example of computer printout at Charlotte Memorial General Hospital, Charlotte, North Carolina, The Medi-Data, Inc. System

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0431-01 [redacted] OLWYN T [redacted] D S CARE PLAN PG 01 NOR
PO-003 PP-00 11-5 LT HIP PROSTHESIS 11-08-71

			08	09	10	11	12	13	14	15
008	BUCKS TRACTION 4LB LT LEG	CONT								
015	CATHERIZE PT PUT FOLEY IN	CONT								
A02	FOLEY CATHETER CARE	CONT								
A	MAINTAIN STRAIGHT DRAINAGE	CONT								
B	CLEAN AROUND CATH BID & PRN	BID&PRN		X						
C	MEASURE & RECORD DRAINAGE/NOTE COLOR & CHARACTER OF DRAINAGE	08H							X	
A01	PT CARE TOTAL ASSISTANCE	CONT								
A	GIVE BATH & BACK CARE; COMB HAIR	QD		X						
B	FEED PT & MOUTH CARE	TIDPC	X					X		
C	SKIN CARE; ENCOURAGE PT MOVEMENT	Q4H		X				X		
D	PREVENT IMPACTION/CALL BELL NEAR	CONT								
017	RESTRAIN IF NEC	PRN								
032	CHECK TEMP QID & CHART	QID		X				X		
043	IV RATE; 75CC/HR	QIH	X	X	X	X	X	X	X	X
044	PILLOWS BETWEEN LEGS	CONT								

0431-01 [redacted] OLWYN T PG 02 END 11-08-71

			08	09	10	11	12	13	14	15
058	O2 03 LITERS/MINUTE	CONT								
A	MOUTH AND NOSTRIL CARE	Q8H		X				X		
B	CHECK POSITION OF CANNULA	Q8H	X		X		X		X	
C	CHECK O2 FLOW RATE (AND SMOKING)	Q8H	X		X		X		X	
D	MAINTAIN HUMIDIFIER FLUID LEVEL	CONT								
048	IVPB WITH SALINE TID X 3 DAYS START 11-08-0800-END 11-08-0800	TID		X				X		
051	SL PCN	CONT								
A	CHECK RATE & IV SITE QIH	QIH	X	X	X	X	X	X	X	X
047	CLEAR LIQUIDS POST NAUSEA	PRN-ALS	X				X			
A	HOUR-CLEAR LIQUID DIET	BID & HS			X					
061	STRICT I & O	CONT								
A	MEASURE ALL I & O; TOTAL 08HRS	08H							X	
074	CHECK BP QID	QID		X				X		
073	FASTING LYTE CHG 11-08									
A	DECAY DIET; MAY HAVE WATER	MWF 361								
080	UP IN W/C DAILY	DAILY		X						

SIGNED

NURSING OBSERVATIONS

ented Record" concept that has been effectively demonstrated by Dr. L.A. Weed at both the University of Vermont Medical Center and Case-Western Reserve University in Cleveland. Dr. Weed's book on the subject, *Medical Records, Medical Education and Patient Care (49)* contains material that is very pertinent to nursing.

Miss Donna Gane, Head Nurse, Gynocology Unit, submitted information on the nursing aspect of their problem-oriented medical record system. Nurses record their observations on the Medical Progress Record in conjunction with physicians' identification of specific problems. They enter subjective information, objective information assessments, and nursing plans according to the problem.

Nurses contribute to the data base by entering a nursing history (patient profile), admission physical data (i.e., vital signs), and possibly present illness. A nursing end-of-shift report is composed of the past 24 hours of information, displayed on the cathode-ray tube, pertaining to each patient. Doctors' orders are taken from the screen for transcription. The patient himself does a complete review of past medical history by interacting with the computer.

In addition, the system design applications include complete drug information, X-ray and laboratory test findings, and nursing procedures. The information can be easily called to the screen for review. Miss Gane was most enthusiastic in evaluating the program:

> The computer serves as a source of continuing learning. The tool is invaluable in teaching logical, structured thinking. It presents, for each problem, a complete list of descriptors, associated conditions, symptoms, plans. It also has the beginning capability of presenting algorithms for symptoms, lending to proper action; i.e., appropriate exams, tests, observations, etc.

Massachusetts General Hospital, Laboratory of Computer Science (*50*)

The applications for the computer at Massachusetts General Hospital have been focused on designing a system to process information about the patient in relation to his therapy. The three major programs were described earlier. Since 1968, the nurses have been developing applications which will be more related to their needs and concerns.

Rita Deziel, R.N., Research Analyst, noted that only one functioning application (the Ambulatory Medical Record System) involves nursing input. Miss Deziel reported that the following projects are currently being explored in the effort to increase nursing input:

1. *Nursing History:* The Staff Education department of Massachusetts General Hospital has approved a worksheet for nurses to help them acquire a data base upon which to plan care and assess future observations. Much of the information now gathered by the nurse could probably be obtained by having the patient fill out a form similar in format to the Automated Medical History, or by having the patient interact directly with a teletype. A prose printout would then be generated for the patient's record.
2. *Problem-Oriented Record:* The Adult Nursing Practitioners in the Medical Nurse Clinic at MGH have enthusiastically adopted Dr. Weed's method of recording patients' problems, plans, and resolutions. We are currently exploring the feasibility of having the nurses interact directly with a cathode-ray tube in order to record their findings. Some of the elements of the Clinical Data Management System would be applied here. Because we have just begun a nursing emphasis in clinical data management, we have neither a data base nor a format of entry for this project. Our ultimate goal is to provide on-line communication between the computer and the primary care giver (doctor or nurse) in order to permit rapid access to previous information, and provide quality control through structured format of entry.

Ohio State University Hospitals, Columbus, Ohio (*51*)

Mrs. Marilyn Barker, Assistant Director of Nursing Service, has worked closely with staff nurses in developing assessment tools

and determining the nursing applications to be implemented when the hospital system applications are operational. Mrs. Barker will coordinate the applications prepared by the nurses with the systems analysts and computer programers in the Department of Computer Services.

The staff nurses and Mrs. Barker designed *Nursing Assessment*, a comprehensive structured booklet with considerable space for recording additional information or comments. The forms in the booklet have been tested on a limited basis, primarily for the purpose of revision and identification of the pertinency of the content to nursing care of patients.

The *Nursing Assessment* booklet contains a detachable three-page foldout section which can be given to the patient or a member of his family for completion. The patient is asked to give information about his usual pattern of living and past experiences, including special diet, medications taken at home, sleep patterns, elimination problems, allergies, occupation, and family composition. Of special interest is a section for expression of concerns about hospitalization or illness as related to job, financial aspects, family, school, fear of unknown, or other matters. Additional information is requested concerning previous care by public health nurses, previous hospitalizations, and languages spoken.

A patient admission program is currently operational at Ohio State University Hospital. A combined cathode-ray tube and electronic typewriter terminal is installed in the department. New admissions, transfers, and all discharges are on-line so that room, bed, type of accommodation, and service are displayed on the screen. Physicians can thus be informed of available beds for preadmission planning and emergency admissions.

The Ohio State University Hospital is considering using the problem-oriented medical record concept developed by Dr. Weed. A nursing personnel profile, to be placed on the Administrative Terminal System, is in the process of being developed. The usual accounting functions and admissions programs have already been successfully implemented.

Community Hospital, Indianapolis, Indiana *(52)*

Mrs. Agnes Hall, Nursing Procedure Analyst, described the medication orders and nurse orders applications ready for implementation at Community Hospital. The "Patient Medication Profile" forms are printed in triplicate by the high speed printer each night and distributed before midnight. One copy, placed in the patient's chart, is a current medication list for the doctor which includes reminders of expiration of orders and Medicare Recertifications. The other two copies are for the Medication Records binder on the basis of which medications are poured and administered. Notations are made on the form as medicines are given. One of these copies is then sent to the business office for charging, the other is placed in the patient's permanent chart.

All orders are read to an operator in the terminal pool over a "hot-line phone." A printout of a medication order is received in duplicate on the floor. It is removed from the printer and attached to the consolidated list in the "Patient Medication Profile." Nonmedicine nursing orders are kept in a second binder and are handled in a similar manner. At midnight the completed form is filed in the patient's chart and the new one put in the binder. The Nursing Care Records binder also contains an Admissions Assessment, Transfer and Dismissal forms, and a Patient Care Plan for each patient.

Pacific Medical Center, San Francisco, California (*53*)

Mrs. Kay Martz, R.N., Physiological Monitoring Coordinator, reported that computer printouts of nursing notes and other clinical data have been tested at the Pacific Medical Center hospital (figure 3, p. 27). She referred readers to *Surgery*, Vol. 64, No. 6, Dec. 1968, pp 1057–1070, for additional information about the system.

Following approximately a year of development, testing, debugging, and preparation of the staff nurses for input of nursing observations, the Automated Nurses' Notes program was implemented for a period of 6 weeks. After completion of the test, the entire staff

evaluated the program. The nurses generally agreed that the nurses' observations did not save the life of a patient, whereas a monitoring system did contribute to saving lives. Mrs. Martz believed that the value of the system could have been supported if there had been time to perfect the program. The existing programs will remain operational in case any of the nurses wish to use them.

Holy Family Hospital, Spokane, Washington *(54)*

Donna Logie, Medical Information Systems Coordinator, described the hospital's admitting, transfer, and discharge procedures. Once the patient has been admitted, information pertaining to transfer, updating of condition, change of diagnosis, expiration or discharge, is automatically and simultaneously sent to all departments of the hospital which have the need to know.

Requisitioning Specimen Collection Notices, and charging for tests are also automatic applications. Specimen Collection Notices are directed to either the nursing unit or the laboratory. The system generates a

Figure 3.—Example of computer printout recorded by nurses in the Physiological Monitoring Research Unit at Pacific Medical Center, San Francisco, California

```
[illegible]  TIME 700-1515 DATE 1227
SINUS BRADYCARDIA .
PVC'S OVER 6 PER MINUTE , PVC'S MULTIFOCAL.
ELEVATED S-T, ON MONITORING LEAD.
TEMPORARY , IMPLANTED , PACEMAKER .
INTERMITTENT CAPTURED BEAT, MA, INCREASED .
MILD, ASHEN , INCREASED .
CONSTRICTION.
NAILBEDS.
CYANOSIS.
PULSE QUALITY , WEAK, PULSE DEFICIT ,
DORSALIS PEDIS, POST TIBIAL , PULSE ABSENT.
ARTERIAL, CENTRAL VENOUS, LEFT ATRIAL .
SKIN, HANDS .
FEET, COOL.
ORAL-TRACH TUBE IN, AIRWAY IN , CUFF INFLATED .
NOR SALINE INTO TRACH QH, TRACH SUCTIONED QH, THROAT SUCTIONED.
(SECRET) VISCOUS , YELLOW, FROM TRACHEA.
(SECRET) FROM OROPHARYNX .
RT UPPER LOBE , LT UPPER LOBE , DIMINISHED, RT LOWER LOBE , LT LOWER LOBE , RALES
(TUBES ) TUBES MILKED PRN, DRAINAGE BLOODY , DRAINAGE SEROSANGINOUS, ENGSTROM.
OUT OF PHASE CONTLY , BAGGED INTO PHASE .
ROUTINE VENT CHECK QH .
MODERATE, INCISIONAL.
LETHARGIC .
WEAK, SPONTANEOUS MOVEMENT.
(SLEEP ) NORMAL AND QUIET.
NG TUBE TO ST DRAINAGE-NPO.
(DRAINA) BILE COLORED, LARGE AMOUNTS .
FOLEY IN PLACE, 50CC ACETIC ACID INST 1/4%.
(URINE ) AMBER , QUANTITY LOW.
BATHED GIVEN, TURNED Q1-2H, SKIN CARE GIVEN OFTEN , RANGE OF MOTION EXERCISES .
BEDREST .
FAMILY VISITED.
HEAD  ELEVATED FOR COMFORT, SIDE  RAILS UP.
HEMOVAC .
REMOVED .
MD NOTIFIED OF, LOW URINE OUTPUT, MD HERE TO SEE PATIENT.
TIRED .
PAIN, TOLERANCE LOW .
DECREASED WITH PAIN MED .
TAPE REACTION .
PRESSURE SORE , SACRAL, SHEEPSKIN ON.
BLOOD WORK DONE , GAS ANALYSIS ART, WOUND CULTURE , URINE CULTURE , BLOOD CULTURE
CHEST FILM.
BLATT  RN .
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daily Laboratory Summary for each patient which lists all test results from the day of admission and all tests in process.

Automation of the pharmacy department is still in a testing phase. Applications for "drug to drug," "drug to laboratory," and "drug to food" incompatibilities are expected in the near future. Several other service departments are being studied and will be implemented as soon as possible.

Mrs. Logie explained that their automated Nurses' Notes and Care Plans are designed to aid the nurse in caring for the patients and in using equipment. "We use a branching type logic in the questions the nurse answers, for example:

Question: Secondary Care Needs?
Answer: Yes
Then branches to more detail:

a. Colostomy
b. Illeostomy
c. Prosthesis
d. Other (text may be entered here)."

No comment was made about input of objective descriptors which would relate to the care given or to the patient's signs and symptoms, his response to illness or prescribed therapy by either the physician or nurse. However, Mrs. Logie described the project as follows:

> We are an *experimental site* for the Clinical Decision Support System (CDSS) project (IBM) at present. Our goal is to find out the feasibility of building one file within the computer that houses all information pertaining to a patient, thus providing easily accessible information to anyone on the health team—no matter where they may be. . . . From the physician's office, the patient's history and physical information is entered. At the hospital, the Nursing Unit enters Nurses' Notes and Care Plan information. Then, wherever a physician, nurse, etc. is, he or she can retrieve or enter information at a moment's notice. . . . We have given the physician's office the capability of retrieving (a) a list of the physician's patients in the hospital, giving diagnosis and condition, (b) all lab results and tests in process from admission day on, (c) list of medications patient is receiving. . . . Hopefully, we will be able to pull off statistical information as the record is being built.

El Camino Hospital, Mountain View, California (*55*)

Margaret Cook, Nursing Coordinator, reported that El Camino Hospital is installing Technicon's Medical Information System which incorporates a major portion of the patient's record. Patients are admitted to the hospital and the system simultaneously. All doctor orders are entered into the system and are transmitted to the appropriate departments for action. When action has been taken, the results are entered into the patient's record through the system. Information from the nursing department and all reporting or charting done by nursing personnel are also entered directly into the system.

Entries are made by means of a Video Matrix Terminal and an electronic light pen. Hospital personnel can thus communicate with the system in their own language. For example, doctors "write" orders using the same terminology they use now.

The final record of the chart is stored in printed form rather than in the computer or on magnetic tape. Every 24 hours, all data entered in the system for each patient is compiled into a 24-hour summary and printed out. This printout, along with signed permits and the doctor's handwritten progress notes, becomes the permanent record.

Presbyterian Hospital, Columbia-Presbyterian Medical Center, New York, New York (*56*)

The applications for the computer-assisted information system reported by Mrs. Janet Monroe, Nurse Coordinator for Data Processing, were very similar to many others included in the report. However, Mrs. Monroe did describe one application at Presbyterian Hospital in Knoxville, Tennessee, which may be of interest to nursing administrators:

> This application is a computer program to evaluate nursing performance. Although it is not available to other hospitals for them to put on their computers, they (Presbyterian Hospital, Knoxville) will send the forms to any hospital nursing department to fill out, return to them and they will run it on their com-

puter and send back the rating. The cost of this service is $3.00 per form. (57)

Mrs. Monroe is a member of the nursing committee of the Hospital Information System Sharing Group. The Committee studies nursing care applications, in the interest of implementing applications that involve nurses and offer benefits to nursing.

The Edward W. Sparrow Hospital, Lansing, Michigan (58)

Mrs. Christy Hawkins, Vice President, Nursing, replied that they have a full-time nurse or nursing committees working with system and computer programers in relation to a completely computerized medical record. They are setting up a pilot study in a 10-bed unit. There will be at least three terminals on the unit plus those in the laboratory, pharmacy, and other departments. During the pilot study a hard copy medical record also will be maintained.

The hospital staff is working on materials for nurses' responses to physicians' orders, nursing orders, patient care plans, and nursing observations. The "computer nurse" and Mrs. Hawkins participate in the medical staff computer committees.

The University of Washington Hospitals, Seattle, Washington (59)

Applications developed by nurses at University Hospital and Harborview Medical Center were described in the materials received from nurses Joan Dressler and Anne Woodson. Miss Dressler is serving as Staff Assistant to the Chairman of a University Hospital-Harborview Medical Center committee which reviews and coordinates all hospital computer applications. In this role she functions as a liaison between departments and between management and the Hospital System Division. Nursing Service is only one of the many departments with which she becomes involved.

Mrs. Woodson is a part-time consultant to the Nursing Services Department at the University Hospital. She assists in the development and implementation of nursing computer projects.

The two applications will aid the professional staff and hospital management in the planning and scheduling of resources. The major objective of the first study, "Patient Classification System," is to develop the ability to assign the right quantity of nurses to units based on the needs of patients. Further information about the preliminary study is available in the A.D. Little report. (60)

The purposes of the second application, "Operation Room Source Document and Utilization Statistics," are to provide monthly and cumulative summaries on the use of University Hospital operating rooms.

A 5-year plan focused on establishing a data base and resource scheduling and commodity accounting sub-systems has been developed. The first thrust is to automate the administrative and management portions of the information system. Installation of terminals on the nursing units is anticipated in a few years. Procedures for automating patient care plans and clinical information obtained from nurses have not been defined.

Nurses and physicians are active implementing problem-oriented charting. The goals include preparation of the patient's record for ultimate computerization, coordinated patient scheduling, automatic ordering and charging for equipment and supplies, and automatic hourly charges for patients in intensive care units.

Harvard Community Health Plan, Boston, Massachusetts (61)

Doris Wagner, Director of Nursing of the Harvard Community Health Plan reported on their new comprehensive prepaid health care program. A computerized medical care record system was being designed for use in their nonhospital setting. At the current stage of development, physicians, nurses, and social workers dictate notes to a transcriber who types the notes on gummed paper and places them in the patients' records.

Several check list "encounter forms" have been designed primarily by and for physicians. The general Physical Exam, Appergy, Triage and Schedule of Patient Activity forms can be used for all patients. The other

"encounter" forms are used with patients cared for by a pediatrician, medical internist, orthopedist, or surgeon. Each form contains coded lists of diagnoses, terms related to body systems (circulatory, respiratory, genito-urinary, etc.) and general health problems most frequently observed in each area of specialization.

Nursing committees are working on a nursing assessment tool, the definition of the role of the primary nurse, and a nursing encounter form.

Rockland County Health Department, Rockland, New York (*62*)

A Patient Summary Report for transcription of data from the records and an automated Patient Summary Reporting System for tabulating the data were tested for a 1-year period by nurses at the Rockland County Health Department. These tools had been developed by Weber and Dickson during a Division of Nursing study, "Nursing Care of the Sick." (*63*) The purposes of this study, as reported at a meeting in New York City, October 16, 1970, were:

> . . . to provide comprehensive and readily available data on the extent and intensity of patients' needs, the type of personnel who could best assist them, and indicators of progress or lack of progress toward optimal health. Such data would provide a sound basis for analyzing personnel utilization and would assist in the development of a patient classification system for local health agencies.

Use of the data processing system decreased the amount of time spent in clerical tasks and summarizing statistical data for reports to the agency and to the State Health Department.

The study aided the staff of the Health Department in developing a simplified method of recording assessments of patients' needs, including a nursing care plan and a shortened narrative report. The study further motivated them to form a self-appointed Records Committee of staff public health nurses, registered nurses, and a supervisor.

The Visiting Nurse Association of Cleveland, Ohio (*64*)

A community health agency electronic data processing system was implemented by this Visiting Nurse Association. The system was designed to process billings, collections, individual patient accounts and statistical data and to provide:

- Uniform data for internal program planning, professional personnel scheduling, and for external reporting;
- Critical information on service (indexes) to the local communities, particularly for high-risk populations;
- Minimal administrative and clerical effort by professional nursing staffs and overall minimal clerical costs, perhaps through the use of electronic data processing.

The application has been successfully implemented and relieves nurses of many clerical tasks. Information concerning the processing of patient data obtained by nurses was not available.

Health Program Systems Center, Indian Health Service, Tucson, Arizona (*65*)

The Sells Service Unit of the Indian Health Service serves Sells Hospital and Clinic, the San Xavier Health Center, and the Santa Rosa Health Center. The patients are primarily nomadic peoples who graze their sheep over hundreds of miles on the Indian reservation. There was no way to obtain previous health records or secure accurate information about health problems, immunizations, prenatal care or current care delivered at one of the other health centers.

Susan Milman, Nursing Consultant, forwarded a "Users Reference Manual" and copies of several forms which had been tested at the Sells Service Unit. Initially, mark-sense paper forms were used, but they were discontinued in order to allow for pick-up of narrative information such as skin tests, measurements, immunizations, and medications. The forms are coded for on-line keyboard input into the system, although the

carbonized paper forms make it possible to have two copies for interdepartmental files and the original for the active family record folder. In addition, the nurse no longer needs to complete multiple reports for her files, for statistics, etc.

The clerical activities formerly imposed upon the public health nurse staff have been significantly reduced. Another significant improvement has come through a developing philosophy of problem orientation. Public health nurses have the opportunity to enter problems (nurse diagnoses) into the health information system. These problem identifications are then available to all members of the health delivery team through on-line terminals.

The system provides a vital communication link between nurses who are located many miles from each other. It is now possible for nurses to retrieve vital information on the patient or family from any of the clinics. Followup contacts can be made to see that patients are taking medications and following other instructions correctly. Rapid access to patient data and immediate updating of the patient's health record assists all members of the health team in the provision of better care for the nomadic Indians.

Status in 1971—Summary

Applications of computer technology in hospitals and in health care institutions have been discussed. Excerpts from materials received in response to the project staff's letter of inquiry and from the literature or personal communications have been presented. The staff is aware that this is not a complete survey of the present state of the art. However, it does give the reader some appreciation of the progress which has occurred since 1968 and shows the increase in nursing involvement.

Computer applications for accounting functions continue to expand and to incorporate a greater number of departmental services. In addition, written nursing observations of patient state, response, and behavior, and nursing care plans are being adapted for computer use. Nurses are serving in conjunction with computer systems personnel in preparing others for the increased assistance of computer technology in nursing Forms designed for recording only problems or deviations from "normal" are being studied. The project staff believe that many advantages will be realized from using structured, systematically-organized nursing assessment forms in patient care settings.

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Chapter 4

The Developmental Process of Phases I and II

Introduction

Hospital computer applications involving nursing and nurse functions were carefully reviewed by the project staff. Although many were extremely helpful, none incorporated the type of system design envisioned by the project staff, physicians, nurses, and others involved in the developmental stages of the project.

In contrast to most 1968 applications, this project was based on the premise that the *patient* should be the primary focus of a system design. It was believed that a system should be capable of processing all significant clinical information generated by and about a patient by any member of the professional team, from the time of admission or first contact to the time of discharge. The information should be available to agencies continuing with the care of the patient and his family. The system should be designed so that, in time, a patient's health data record could be initiated at the time of first patient or family contact with the health care delivery system, updated as necessary to maintain the complete health/illness record, and concluded with autopsy findings after death.

A patient-oriented medical records system design could eliminate duplication of patient data. Social and financial information obtained by the admitting clerk would be readily available to other health personnel. A patient's health history or physical findings recorded by the physician would be available to the nurse or others responsible for the patient's care.

The Report of the National Advisory Commission on Health Manpower(*1*) noted: "... there is an urgent need for an improved capability to provide medical records for the patient." Nursing records are, of course, a part of medical records.

Many efforts have been made to update medical record systems through the use of electronic data processing, microfilm, audiotapes, and cathode-ray tube real-time readouts or other technological devices. However medical records have remained practically unchanged since they were first maintained over a century ago.(*2*) Most efforts have been directed toward adapting the traditional record system to modern technology. The need for adaptation to changing requirements has often not been considered.

Gertzog states,(*3*) "... much of the significant work being directed at improving this capability is characterized by a radical restructuring of the medical record system." He adds, "... at the present time, the medical record tends to be an 'event' or 'incident' record rather than 'personal' or 'individual'."

He concludes:

> ... it is apparent that no amount of technological sophistication will be a panacea for the ills of medical record systems. Technological innovation may be a necessary condition, but it will not be sufficient condition for planning and designing good medical record systems. ...A fundamental reorientation of what the medical record is and how it should be used will also be required.(*4*)

Computer-assisted information systems can relieve the nurses of clerical tasks involved in information handling: scheduling,

ordering, transcribing and organizing. These tasks, for which the nurse has traditionally assumed responsibility, now absorb so much of her time that she is unable to become involved in giving direct patient care. It is the belief of the writers that only by relieving the nurse of all these clerical tasks can she be reoriented to patient care and to a new automated medical record system.

During the initial phase of this project, nursing assessment tools for use with hospital patients were developed. Nursing assessment tools for use in community health agencies were developed in the second phase of the project, as were tools for improving information communication in and among the various community health care agencies and hospitals.

Review of Pertinent Literature

Phase I

A number of studies were of assistance to the project staff in designing the nursing assessment tools. Faye McCain(*5*) developed a comprehensive "Guidelines for Assessment" form which she used to prepare graduate students for in-depth assessment of their patients. This tool was an aid in identifying areas of nursing assessment and supported the idea that the nurse should be responsible for systematically gathering information.

Pierce *et al.* (*6*) assembled a list of objective terms and phrases used by nurses, physicians, and other personnel in their care of surgical patients. Nurse observers, stationed with the patients and at the nursing station, recorded all pertinent descriptive terms. Many of these terms were included in the forms developed by the project staff.

May McPhetride(*7*) and Dorothy Smith(*8*) reported that structured nursing history forms were being used by their students to gather information about patients and develop plans of care. Dagmar Brodt(*9*) identified 11 "Dimensions and Components of Nursing Practice" based on a study of the several hundred different nursing observations recorded in patients' medical records.

Howland and MacDowell(*10*) developed a system model to measure the effectiveness of patient care in the hospital. The "feedback" principle was applied to communication flow and the need for information relative to patient care decision-making.

Phase II

Several studies have been designed to improve home patient/family care by increasing the quality of recorded data(*11-13*) and by simplifying and reducing routine paper work with data processing techniques.(*14*) Various data collection forms have been developed for determining patient progress, the effectiveness of community health nursing, and staff needs.

Roberts and Hudson designed a method of reporting patient progress that is used for evaluating and describing services of the community health nursing program.(*15*) The method is based on the nurse's judgment and ability to evaluate patient progress and patient and family health needs.

Roberts commented,(*16*) "Fundamentally, the most important contribution of patient progress reporting lies in the fact that it demonstrates a new approach to teaching and to assessing community health services, accenting not what we do but rather what happens to patients who have the benefits of community health."

Schwartz, Henley, and Zeitz conducted a study of the nursing and psychosocial needs of the elderly ambulatory patient.(*17*) Structured interviewing guides were developed for quickly and systematically obtaining and recording nursing histories and information pertaining to environmental and emotional problems.

Mickey(*18*) utilized a single structured nursing interview form to investigate cur-

rent household status. An interviewer made queries in 18 categories of potential health problems and assessed intensity of need, need for hospital nursing care, and need for nurse home visits. These assessments were transferred to an Interviewer's Summary Sheet and final judgment was made on the family as a whole. The author believed this method would be valuable in determining needs for extra hospital nursing services and for inservice education for nursing personnel.

Freeman and Lowe(*19*) developed a system for periodic assessment and identification of changes in family nursing competence and estimation of the effect of nursing intervention on competence deficits.

Johnson and Hardin studied the content and dynamics of (community health nurse) home visits.(*20*) These nurses assessed the health status of patients by asking general questions plus a few specific questions relevant to the patient's diagnosis. The results of this study suggest that "nurses do not ordinarily tend toward comprehensive and detailed assessment of the bodily status of the patient at the verbal level."(*21*)

Schwartz, Henley, and Zeitz(*22*) commented that:

> . . . the data upon which assessments are based are neither acquired nor recorded by professional nurses in any uniform fashion on which nurses have reached consensus. It is an interesting characteristic of the profession that the practitioners of any one discipline tend to approach a problem in much the same way, considering a wide range of relevant information, then discarding information that is not potentially useful and narrowing the focus to an examination in depth of the factors which appear to bear on the problem. Whether the profession is medicine, law, or engineering, the statement of the problem and the proposal for its solution can be reduced to a convenient tool—a working 'shorthand'—which has the same meaning to any member of the professional's peer group, anywhere.
>
> . . . nursing has yet to arrive at this point; until it does, 'nursing evaluation' cannot be considered a truly professional activity.

Walker and Selmanoff's study of the nature and uses of nurses notes in the hospital setting revealed a low frequency of inaccurate entries but a high frequency of omission of significant information.(*23*) It is reasonable to assume that community health nurses also fail to record significant information.

Research activity is also focused on developing systems for meeting the patient's needs after he leaves the hospital. In "Nursing Service Without Walls,"(*24*) Wensley stresses the urgency of developing community-centered plans for referring patients to and from public health nursing agencies and hospitals:

> . . . The success of interagency referrals depends upon acceptance of a philosophy that encompasses three basic beliefs:
>
> 1) the focus must always be on the patient—his needs and well-being;
> 2) the assessment of a patient's complete nursing needs—in hospital and out-of-hospital is an integral, high-priority part of nursing;
> 3) the need for cooperation among community organizations, professional personnel, and other citizens is essential along the entire continuity continuum.(*25*)

Turner and Mahoney note that "because a patient's nursing care needs and problems often continue to be present after discharge from a hospital, appropriate referrals to nursing and other community agencies is an important aspect of professional nursing . . . every nurse should assume this as one of her basic responsibilities."(*26*) They organized a program at the Boston Veterans Administration Hospital for identifying and recommending for followup care patients who might profit from a continuation of nursing care after discharge. The program results included better planning for nursing care and increased professional development of nurses.(*27*)

Anderson and Irving(*28*) also stressed the need for early planning for continuing care of the patient. The multidisciplines engaged in comprehensive care must concern themselves with total care, which means preparation for home management at the beginning of the program.

Park and Hughes(*29,30*) developed a referral form for conveying to a nurse the many

specific facts she needs when a patient's care becomes her responsibility. The content and format of this information sheet were of considerable help in designing the project's "Transfer Summary" form.

Conclusions Drawn from the Literature

These studies and others were demonstrations of the need for standardized nursing assessment forms compatible with data processing techniques and automated handling of patient health information. Identification of objective descriptive terms appropriate for recording patient data by the nurse in hospitals, community agencies and home health care settings would aid in assuring not only continuity of care, but also continuity of communication among all members of the health team.

Development of the Project

The broad objective of the project, as stated in Chapter 1, was to improve the quality of patient care through the development of a tool for assessing patient health status and recording essential information throughout a period of hospital or home care. The tool was to be readily adaptable to a computer-assisted communication system.

The project staff believed the traditional nursing record system could not be automated. A new record system incorporating design systems adaptable to computer technology was needed. In order to develop computer applications for the desired continuous, contiguous health care data system, it was essential to identify the clinical information nurses need for planning patient care and to organize the data into a format which could be adapted to an automated system.

Preliminary Studies

Prior to and throughout the developmental processes of the project, members of the Faculty Advisory Committee of the School of Nursing (appendix B), graduate students, and administrative and staff nurses at the study hospital worked closely with the project staff. They identified the clinical information essential and pertinent to patients in each of the nursing specialities: Adult Health, Psychiatric-Mental Health, Maternal Health, Child Health, and Community Health.

A comprehensive list of the information considered essential for making nursing decisions and planning patient care in each of the specialities was developed. The project staff attempted to include all the terms and phrases into a single nursing assessment tool appropriate for use with any patient. However, the complexity and volume of data necessitated limiting the assessment tool to a particular category or classification of patients.

Selection of Patient Group

The staff decided to focus Phase I of their study on the patient hospitalized for surgery. The following facts influenced their decision:

1. The average length of stay for a surgical patient was 7 to 10 days.
2. The care of these patients follows a pattern of movement through various clearly identified stages or phases.
3. Although the patients have many different types of surgery, the response of the patient to the procedure and the terms to describe the patient's progress or lack of progress would be similar.
4. The patient is essentially a stranger, and therefore during a short-term hospitalization, it is even more crucial that nurses establish a positive relationship within a limited period of time.
5. Patients admitted for surgery range across all age groups. This would provide an opportunity to evaluate the content relative to this variable.
6. Concurrently, several surgeons were developing prestructured forms to be used to record patient "History and Physical" data and were also defining the clinical information pertinent to patients admitted for a variety of surgical procedures. It was anticipated that the information obtained by both the physician and the nurse would be inter-

faced upon the implementation of the computer-assisted hospital information system planned for the new county hospital.

Study of Current Record System

Prior to development of the nursing assessment forms, the project staff made a content analysis of patient medical records and communication patterns at the study hospital in order to become aware of all aspects of written and verbal information handling. They analyzed the information recorded by nurses in 50 randomly selected medical records of patients cared for on the experimental unit.

In order to identify content and communication patterns, the staff:

- reviewed all records maintained or used by nurses during all phases of care of patients admitted for surgery;
- reviewed all hospital and administrative records and requests for patient services or supplies and drugs, audited a representative number of telephone calls which related directly or indirectly to the care of the patient;
- attended patient-care conferences on the study units, change of shift reports, informal conferences between nurses, student conferences with faculty members; and
- observed all members of the health team in relation to the communication of patient information and recorded anecdotal material including verbal discussions of clinical data.

Concurrently a survey of communication patterns in two local community health agencies was made by Althea Glenister, Phase II research associate, who identified the problems which existed in those settings.

Development of Nursing Assessment Forms

Nursing Assessment forms were developed during both phases of the project. A basic process was followed in the development of all forms. However, there were variations in the testing and evaluating procedures for each phase of the project.

The particular steps followed in developing the forms were:

1. identification of clinical content;
2. separation of this content into constant or variable data;
3. selection of the appropriate objective terms or phrases which describe the state-of-the-patient, and organization of these terms into sets of related information;
4. construction of each of the forms which serve as guides for assessment and tools for recording;
5. preparation of the users manuals which include instructions and definitions of terms used;
6. reviewing the content of each of the forms and the manuals with members of the advisory committee;
7. orientation and preparation of personnel to use the forms;
8. field testing by members of the advisory group and nurses who used the forms to record information about their patients;
9. evaluation and analysis of the clinical content recorded during testing;
10. revisions as indicated and retesting until accepted by nurses and staff as practical, feasible, and useful for decision-making;
11. construction and design of the final set of forms by the graphic artist.

Identification of Clinical Content

Phase I.—Members of the nursing faculty of SUNYAB School of Nursing and physicians and the nursing staff at the study hospital reviewed professional and trade journals and nursing and medical textbooks in order to identify the necessary clinical content for the forms. Several of the studies(*5–11*) were especially helpful to the project staff in their determination of necessary clinical content and selection of terms and organization of the forms.

Phase II.—Members of the community health faculty from the SUNYAB School of

Nursing worked with the project staff. They critically reviewed, evaluated, and selected the patient/family care clinical information needed by nurses for planning and coordinating nursing care in the home.

Several community health concepts were the basis for identification of the content that should be included in the nursing assessment forms. These concepts were: (1) the family is a unit of service; (2) the health status of a family can be measured; (3) families differ in their ability to cope with stress; (4) socioeconomic, cultural, religious, and environmental factors influence health perception and utilization of health services; and (5) continuity in the communication of information both intraagencies and interagencies is important to the continuity of care.

The nursing assessment forms were to be designed to:

- identify the needs of the patient in relation to himself, his family and his environment, and to
- include only those terms and phrases which objectively describe the patient/family situation and health problems.

Community Health Nursing areas of content included in the assessment forms are listed in appendix D. Much of the content was similar to that included in the hospital assessment forms.

Capturing significant data about family members as well as about the patient was a major problem. In community health nursing, the family becomes the patient, so efforts were made to design forms appropriate to the family unit. Success was limited and only some data could be included about all family members if the forms were to be of practical length and useful to the nurse.

Selection of Terms

Selecting and organizing the terms into meaningful related sets of information useful to nurses was a challenging task. Dr. Lillian Pierce, project consultant, assisted the staff in the design of several studies and stressed the importance of including only objective descriptive terms in the Nursing Assessment forms. SUNYAB School of Nursing Advisory Committee members evaluated the use of the tools as sources of information for planning patient care. Students tested the forms in patient care situations during laboratory experiences. Faculty members and students identified unclear or unnecessary terminology.

Construction of the Assessment Forms

The information was organized into related sets and the data collecting tools were constructed. The forms were designed for easy and practical use by the nurse and for easy adaptation to a computer-assisted hospital information system. They were usable as guides for assessment, as tools for recording pertinent data and, in time, as source documents for nursing clinical research data. Signs and symptoms indicative of deviations from wellness were considered to be more significant to planning and implementing patient care than were signs and symptoms of wellness. Therefore, a problem identification approach was adopted.

This approach included three basic principles:

1. The nurse should be required to record only those data about the patient which are significant and/or indicate illness.
2. The standardized terms must objectively describe the patient condition as accurately and completely as possible in each area of nursing responsibility and concern.
3. Opportunity should be provided to record other terms if the standardized terms were inappropriate, in the nurse's judgment, to describe the patient.

The nurse evaluates the patient in each area of nursing concern. She notes unsatisfactory patient progress and departures from the acceptable limits of a "normal" state of health for the particular patient. Limiting information collection to departures from the norm reduces the volume of data. This concept, which has been utilized in applications for business and management, is referred to as management by exception. The authors believe its use will in-

crease the probability of nurse acceptance of computer-assisted information systems.

Organization of Content

The nursing assessment forms were designed to indicate changes in patient condition and to assure continuity of patient care. The information would be readily available to all health personnel responsible for the patient.

The care of a patient can be separated into logical sequential time periods. A patient's admittance to the hospital or first visit with health care agency personnel initiates the gathering of a great deal of information. The continuing care of the patient and his response to therapy generates more clinical information which helps to identify the patient's progress or lack of progress. Feedback of data aids the nurse and physician in evaluating the effectiveness of the therapy and the need for further decisions and action.

Gleuck(*31*) developed a conceptual model of the organization of patient data. The model was based on an analysis of patients' medical records at Camarillo State Hospital. The records of discharged patients plus summary data from all subsequent patient contacts at any member institution or clinic were added to and maintained in the medical records file. The data were separated into two categories: constant data that are expected to remain unchanged, and variable data that are expected to change during the course of treatment. The model was adapted by the investigator to illustrate the collection of clinical data by the nurse from admission of the patient through his discharge from the hospital (figure 4, p. 42).

Constant Data.—Basic information forms for collecting constant data were developed during Phase I and II. Constant data were primarily extraneous variables which Abdellah and Levine(*32*) classified as:

> Organismic variables—age, sex, marital status, education, type of work, personality, height, weight, blood pressure, racial group, nationality, religion, job skill, intelligence, hair color, eye color, political belief, income, level of wellness;
>
> Environmental variables—climate, family composition, governmental organization, work organization, physical setting (layout, etc.), ideological climate, community setting.

In addition, certain patient/family health factors such as allergies and chronic and current health problems were included in constant data forms.

Most of the constant data could be gathered during the first visit. A great deal of this information could be communicated through hospital or health care agency referral forms or, in the future, by a computer-assisted health data network.

Variable Data.—The collection of variable patient or patient/family data that was expected to change during a period of care, was correlated with a particular period of treatment. Each of the major phases of care required specific kinds of data. The variable nursing assessment content was therefore organized according to phases of care. The forms were used as guides for periodic assessment and for recording any significant changes from baseline data.

Preparation of Manuals

Users manuals (appendices C and E) were prepared to serve as guides for completion of each set of forms. General instructions pertinent to all the forms were stated in the introduction to the set of forms. Specific directions, purposes, and a copy of each form were included in the manuals. Concise, clear definitions of terms and phrases, selected from standard dictionaries, nursing and medical dictionaries, and nursing textbooks, were included.(*33–37*)

The manuals were used in orientation classes, as reference material during field testing, as "desk copies" on each nursing unit, and for assuring the validity and reliability of the information recorded by nurses.

Preparation of Personnel

Throughout both phases of the project, the staff assumed responsibility for the direct education and preparation of nursing personnel at the study hospital and agencies and the indirect education and preparation of nurses locally, nationally, and internationally. Nursing personnel, students, supervi-

sory and administrative nurses, members of the faculties at community schools of nursing, and members of the faculty of SUNYAB School of Nursing were included in the various educational programs. These programs included workshops, seminars, guest speakers, group and individual conferences, telephone lectures, speeches, audiovisual materials, and field trips to computer centers.

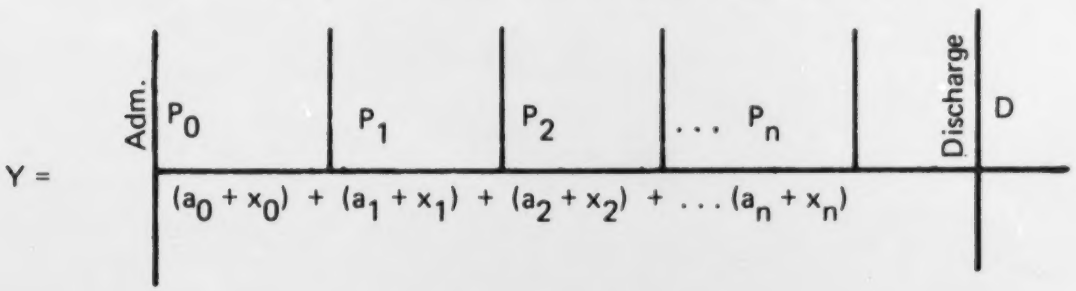
The broad educational objectives of the project staff were to:

- present the concepts of cybernetics, system and communication theories;
- describe how electronic data processing could be used advantageously to improve communications of large volumes of information in health care institutions;
- present the philosophy, goals, and objectives of the current project.

The *specific objectives were to* enable nurses to:

- gain an awareness of the future implications of technology in information communications on patient care and the role of the nurse;
- become involved in identifying the clinical information nurses need in plan-

Figure 4.—Model for the collection of clinical data by the nurse



Following is an explanation of the symbols

Y	=	Time or length of stay in hospital from admission to discharge.
$P \ldots P_n$	=	Logical sequential "time periods" (e.g. admission, pre-operative, surgery, immediate post-operative, convalescent, etc.).
$a \ldots a_n$	=	Constant patient data, e.g. blind, deaf, chronic disease state, etc. (Not reason for current hospitalization).
$x \ldots x_n$	=	Variable patient data (changing patient states during hospitalization).
D	=	Discharge summary. Summary of significant nursing information which would be useful to any nurse caring for the patient following this hospitalization.

ning and implementing nursing care; and
- assist the project staff in testing the nursing assessment tools.

Problems of Simulating a Computer System with a Paper System

As anticipated computer facilities were not available within the contract period, the nursing assessment forms were used only as a manual or paper system. There were several problems related to the use of a paper system.

Tools providing space for recording initial assessments and reassessments of variable data were unwieldy and impractical. Considerable duplication of information was necessary to assure correct identification with the patient and family. This basic information would be recorded only once and retrieved as needed with an automated system. Nurses were required to obtain and record the information which had been identified as "essential" *for decision making. An automated* information system would enable the nurse to take advantage of information recorded by other health professionals.

The advantages inherent to an automated information system could not be demonstrated to nurses who tested the forms. Instead, the nursing assessment forms were a burden to some, as they were maintained in addition to regular hospital records.

Testing and Revision of Nursing Assessment Forms

Testing and revision of the forms and manuals was a continuous and interrelated process throughout the development period. Considerable testing was done by the project staff, members of the advisory committees (appendix B), and staff nurses prior to extensive field testing by the nurses in patient care settings.

In addition to Dr. Lillian Pierce who continued to provide consultation, Dr. Ruth B. Freemen, Professor, Public Health Administration (School of Hygiene and Public Health), The Johns Hopkins University, served as a consultant during Phase II of the project. She reviewed the project materials and stated that "the structured assessment tools were very complete and comprehensive, and it was not unreasonable to expect a nurse to collect this kind of information during an intake interview."(*38*) Dr. Freeman made some suggestions pertaining to the organization of the content of the forms, and noted literature references, resource persons, and research studies which might be of assistance to the project staff.

Plans for each of the field tests were discussed with participating supervisory and staff nurses. Orientation classes were made available to all staff members. Prior to testing, copies of the manuals and forms were given to each staff nurse. Questions were encouraged and the project staff supported and assisted the nurses throughout the field testing. Situations significantly related to the final design of the forms are discussed below. Field testing of the forms is continuing beyond the project's contract period.

The first group of Nursing Assessment forms, for use with surgical patients during their period of hospitalization, were designed for recording observations at three points in time:

1. admission of patient to hospital: the initial assessment or baseline data,
2. reassessment(s) to note significant changes, and,
3. a summary reassessment to be completed at the end of each 24 hours (or other time period as established by nursing administration).

When implemented as a paper system, additional sets of the form would be used to provide a continuing record throughout the patient's hospital care.

Nursing Assessment: Basic Patient Information (Form 0001)(See form, appendix C, page 83.)

The form was designed for the initial collection of constant patient data. Two hundred and four forms were tested during the admission of patients to the experimen-

tal hospital unit. The content of this form was judged appropriate and adequate. The form was accepted by staff nurses with only minor changes in content and organization.

A recent graduate of the hospital's School of Nursing stated that, for the first time, she felt she knew her patients and was amazed at *their response to her interest in them.* The information in the form helped her know what to ask of the patient and made it easier to initiate conversations with newly admitted patients. The content of the form made admitting a patient a more meaningful experience to the patient and to the nurse.

Other nurses reported that the form was easy to use once one became familiar with the content. It served as a reminder of health related questions which should be

Figure 5.—Example of a simulated computer printout of patient data

NURSING ASSESSMENT: BASIC PATIENT INFORMATION

(Sample simulated computer print-out of data)

XXXX, BERTHA M. 053870-A
126 MADISON [redacted] N.Y. W-F-M
3-23-02 CATH

ADMITTED TO J-2 @ 8:40 A.M. BY WHEELCHAIR WITH FAMILY; PATIENT SOURCE OF DATA;

DIFFICULTY IN UNDERSTANDING ENGLISH; COMMENT: ONLY WENT TO 3RD GRADE;

PRESENT ILLNESS: SURGERY, CLOSURE OF COLOSTOMY; COMMENT: BOWEL RESECTION, MAY, 1970; SYMPTOMS--BLEEDING, RECTUM; LOW BACK PAIN & SWELLING; FOR 1 YR.
6 PREVIOUS HOSPITAL ADMISSIONS; LAST ADMISSION IN MAY, 1970, COLOSTOMY

STRONGLY POSITIVE FEELINGS ABOUT NURSING CARE, COMMENT: "THEY WERE VERY GOOD TO ME"

ALLERGIC TO ADHESIVE TAPE; CHRONIC HEALTH PROBLEMS: ULCER & RECTAL BLEEDING; CANNOT CLIMB STAIRS; PATIENT RECOGNIZES CHRONIC HEALTH PROBLEMS, EXPECTS COMPLETE RECOVERY FROM ULCER, DOESN'T KNOW PROGNOSIS RECTAL BLEEDING COMMENT: "FEELS OPTIMISTIC ABOUT SURGERY BUT HAD 'RELAPSE' AFTER COLOSTOMY SO DOES NOT EXPECT COMPLETE RECOVERY"
UPPER DENTURES, WEARS GLASSES, IMPAIRED HEARING-RT EAR; HEIGHT-5'2"; WEIGHT-183 LBS.

VORACIOUS APPETITE

COLOSTOMY, 3 MONTHS DURATION, SELF CARE 4 TO 6 X/DA. NOCTURIA, 2 X/NIGHT

USUALLY SLEEPS FROM 10 P.M. TO 5 A.M.; SIDE POSITION, SMALL EXTRA PILLOW

POST-MENOPAUSAL; HOMEMAKER, WORKED 1 DA/WK, CLEANING WOMAN; HOBBY-CROCHET, GARDENING;

LIVES WITH FAMILY IN SINGLE HOUSE, BED & BATH ON SEPARATE FLOOR; COMMENT: "COULD NOT CLIMB STAIRS, SLEPT ON COUCH TO BE NEAR TO BATHROOM"

COMMENT, VISITORS: "LIKES COMPANY"

M.J. Smith R.N.
signature

M.J. SMITH, R.N.

asked of the patient. A simulated computer printout of patient information recorded by a nurse during this field test illustrated the type of data obtained (figure 5., p. 44).

Nursing Assessment: Patient Progress (Form 0002)(See form, appendix C, page 90.)

The form was designed for collection of baseline and reassessment variable data on patient health/illness status. Information could be recorded three times during each 8-hour period for 3 consecutive days. This frequency, comparable to traditional charting practices, was an aid in determining the frequency of significant changes.

Following preliminary testing at the study hospital, a field test was conducted at Porter Memorial Hospital, Denver, Colorado. This hospital was selected because the staffing patterns assured the forms would be completed by professional nurses.

Each of the 17 completed sets of the forms covered the 72-hour period following the recovery from anesthesia phase of patient care. The content of the forms was analyzed and compared with the content of regular nursing records which had also been maintained by nurses and assistants. An analysis of the project forms and regular records revealed marked differences in the quantity and quality of clinical data. However, toward the end of the 3-week test period, some improvement was noted in the information recorded in the traditional records.

The form was evaluated by participating nurses. They found it extremely difficult to clearly identify changes in the status of patients over time, especially toward the right hand side of the page where the "checkmarks" were further removed from the descriptive terms listed on the left hand side of each page. The form was revised and tested extensively by registered nurses in several local hospitals. In addition, students of several School of Nursing, SUNYAB faculty used the form during laboratory experiences in Adult Health.

The content of the revised form was found to be appropriate for patients with many kinds of illnesses and of all ages, except infants and young children. The design still prevented recording changes in condition over time. Since this problem will not exist with a computer-assisted system, it was neither possible nor feasible to resolve this design problem of a paper system to be used for a period of several days.

Nursing Assessment: Recovery from Anesthesia (Form 0003)(See form, appendix C, page 100.)

This form was designed to show patient progress in the recovery unit. Two hundred and sixty forms were completed by staff nurses during the 1-month field test. This form was the only nursing record maintained during the test. The form was approporiate and adequate for 205 general surgery adult patients. However, it was not considered adequate for recording all essential information on 61 "surgical-intensive care" patients with acute neurological, respiratory, or circulatory problems.

The head nurse and most of the staff nurses liked the form. They found it useful and practical for recording data and a source of pertinent information during the patients' recovery from anesthesia. All but one of the nurses liked the form better than their present recording system and would like to continue using it.

Field test at Loyola University Hospital—Further testing was needed to determine if the revised forms were appropriate for all age groups and all surgical treatments. Five hundred sets of the form were completed by staff nurses. The test forms replaced the regular nursing records during the testing. Each page of the form was printed on carbonized paper and the copy was sent to the project staff. The content and design of the form were considered adequate and were well accepted by the nurses. The nurses recommended that the form be adopted by their Hospital Records Committee and when feasible, be programed for the hospitals' on-line system.

Eight-Hour Intake and Output (Form 0004)(See form, appendix C, page 109.)

This worksheet was designed to record hourly the patient's fluid intake and output

and certain descriptive terms specific to this aspect of care. A summary of each 8-hour fluid totals and identified problems related to fluid therapy and elimination of body wastes could be very helpful to nurses if it were programmed for an on-line system.

Nursing Assessment: Transfer Summary (Form 0005)

(See form, appendix C, page 113.)

A patient referral form completes the set of forms used with hospitalized surgical patients. The standardized computer-manageable discharge assessment form would be completed prior to the patient's discharge from the hospital.

The project staff collaborated with the Nursing Committee of the Health Data Network for the Western New York area in the development of a referral form. Miss Judith Schneider, formerly of the project staff, served as chairman of the committee charged with developing the nursing part of the transfer summary. (See appendix B for committee members). The nursing information should be part of a combined referral form containing information gathered by various members of the health professions: physicians, nurses, social workers, physical therapists, nutritionists, psychologists, etc. Articles by Park(*39*) and David et al.(*40*) were of assistance in determining the content, design, and organization of the form. The multipurpose form was designed to serve as a transfer referral summary to or from any health agency. It would provide a continuing flow of information needed by nurses to plan and implement nursing care when a patient moves from one setting to another.

Miss Judy Kicinsky, R.N., the Public Health nurse coordinator of discharge planning at Columbus Hospital, tested the form on 11 patients. She considered the content areas complete and recommended additional space for noting "Family Concerns" and for recording any patient information communicated by phone prior to patient transfer.

A second test was in progress in the respiratory care center and clinic for diabetic patients at Millard Fillmore Hospital. Preliminary results indicated that the content of the forms was pertinent, even though minor changes were needed. These changes and additional field testing could not be accomplished within the contract period.

Field Testing of Forms at Community Health Agencies

Nurses at the Visiting Nursing Association of Buffalo (VNA) and the Erie County Health Department (ECHD) assisted in the development and testing of these forms. Miss Janet Lindner, Director of Nursing at the VNA, made the necessary cooperative arrangements and Miss Marguerite Barry, a Nursing Supervisor at the VNA, served as coordinator and chairman of the Advisory Committee. Mrs. Esther Neill, Director of Nursing at ECHD, and Miss Mary Arnim, Associate Director of Nursing at ECHD, enlisted the cooperation of the nurses in their organization.

The nurses at VNA and ECHD who served on the committee were highly motivated, knowledgeable and dedicated to improving patient/family care and family health records. They were concerned about gaps in intraagency and interagency communication and were aware of the benefits to be realized from the introduction of computer technology into the agencies as a means of improving their information systems.

The VNA was selected for most of the field testing because all personnel were at one central location. The ECHD was decentralized and its 10 offices were located throughout the city and Erie county.

Testing by Visiting Nursing Association Personnel

One VNA nursing team used the complete set of forms on each new patient admitted to their unit during the 1-month test period. The set was composed of the following forms (see sample forms in appendix E):

Nursing Assessment: Basic Patient/Family Information (CHN 1001)

Nursing Assessment: Patient Progress (CHN 1002)

Nursing Assessment: Medications, Treatments, Diet Therapy (CHN 1003)

Nursing Assessment: Family Interactions (CHN 1004)

Nursing Assessment: Family Roles and Activity Patterns (CHN 1005)

The other agency nursing personnel tested only the Patient Progress and Medications, Treatments, and Diet Therapy forms. Nurses who tested only these two forms considered them adequate for noting patients' physical status and maintaining a record of current therapy. However, the forms were much more meaningful when used as part of the complete set of forms, and it is possible that use of the forms is desirable only when the entire set is implemented.

Student Testing of Forms

Senior students at SUNYAB School of Nursing tested 62 sets of the forms as part of their laboratory experience. Forty-two of the students completed an evaluation of the forms. They considered the clinical content generally appropriate and pertinent in describing patients and families. The format, organization, and content were in need of revision in some areas. Inclusion of assets of the patient and family and normal behavior or health patterns was suggested by several who evaluated the forms. Revisions failed to solve problems associated with the volume and complexity of the patient/family data which must be handled within a paper system.

Nursing Assessment: Clinic Summary (Form 0006)

(See form, appendix E, page 163.)

This clinic referral form was designed to provide a means of communication between the clinic nurse and the community health nurse. Many patients visited several clinics and, in most instances, there was no communication of patient information between clinics or between a clinic and the nurse involved in followup care. Therefore, the only source of information for the community health nurse was often the patient or a member of his family.

Several members of the SUNYAB faculty and RN transfer students evaluated the clinic summary form and judged the content adequate and the form a satisfactory method of communicating essential Information. Project time restriction prevented testing the form in clinics with patients cared for by a community health nurse.

Final Design of the Forms

Unfortunately, it was not possible to complete adequate field testing of the community health agency forms with the project time period. However, patient/family data needed by nurses for decision-making in the community health setting have been organized into structured formats. They will serve as source documents for implementation of an on-line computer-assisted information system. With minimal design changes, the forms could serve as the source of data for direct input into a system.

Summary of Project Systematic Nursing Assessment Forms

The titles and purposes of the systematic nursing assessment forms developed during the current project are listed below. The final design of the forms and the corresponding manuals are in appendices C and E.

The forms developed for use in hospitals were:

1. Nursing Assessment: Basic Patient Information (Form 0001). This form is to be filled out immediately following the patient's admission to the patient care unit. The data to be recorded is, in general, constant patient data; i.e., that data which *is not expected to change* during the course of the present episodic illness.
2. Nursing Assessment: Patient Progress (Form 0002). This form is to be filled out immediately upon the patient's admission to the care unit to establish all baseline data for comparison upon reassessment throughout the patient's hos-

pitalization both pre-operatively and post-operatively. The data to be recorded is, in general, all variable patient data which *is expected to change* during the course of the present episodic illness. For other kinds of adult patients, this form would be used on a continuing schedule to note significant changes in the patient's condition.

3. Nursing Assessment: Recovery from Anesthesia (Form 0003). This form is to be filled out upon the admission of the patient to the recovery unit, and during the recovery phase. Just prior to discharge, a reassessment of the patient is to be completed to identify the patient's status at time of transfer to the nursing care unit.
4. Eight-Hour Intake and Output—a Worksheet (Form 0004). This form is to be used for any patient whose fluid balance is to be recorded. The accurate recording of these measurements and the observations by the nurse which indicate his progress or lack of progress is one of the most significant sources of patient data for decision-making, not only by the nurse but also the physician.
5. Nursing Assessment: Transfer Summary (Form 0005). This form is to be used by the nurse responsible for the care of the patient during this episodic illness. It is a multipurpose form and may include some information which is more appropriate to a nurse in one setting than in another situation. The form is designed to portray the pattern of problems observed during a period of care and to identify those which still persist at the time of transfer.

The forms developed for use in community health agencies were:

1. Nursing Assessment: Basic Patient/Family Information (CHN 1001)
   This form is used to record the patient and family nursing and health history. The focus is both patient and family.
2. Nursing Assessment: Patient Progress (CHN 1002)
   This form is used to record signs and symptoms which indicate problems, how his illness affects activities of daily living and the coping ability of patient and family. The focus is primarily on the patient.
3. Nursing Assessment: Medications, Treatments, Diet Therapy (CHN 1003)
   This form provides space for the nurse to record current therapy and to identify the most freqent types of problems encountered by the patient and family. The focus is primarily the patient.
4. Nursing Assessment: Family Interactions (CHN 1004)
5. Nursing Assessment: Family Roles and Activity Patterns (CHN 1005)
   These two forms include information which will assist the nurse in identifying the emotional stability of the family as a unit. The focus is on the family with the patient as a member of the family group.
6. Nursing Assessment: Clinic Summary (Form 0006)
   This form provides a means of communication between the clinic nurse and the community health nurse. Field testing of the form was not undertaken within the contract period.

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Chapter 5

Preparation for Computer Applications

The Systems Approach

A thorough analysis of current written and verbal communication systems was made in preparation for development of meaningful and useful systematic nursing assessment tools for information handling. The tools have been designed for manual use and for easy adaptation to a computer system. Technological advances in designing third generation system terminals now provide means of rapid and easy input of nursing assessment data.

In the next few years, manufacturers will design new and better equipment if nurses and other health professionals specify what they want a system to do, identify the information that is to be processed, stored and retrieved, and provide supporting evidence for the need of such systems.

In a paper titled, "Leadership for Technological Advance in Nursing," Jytte Kiaer stressed:

> . . . when it comes to leadership for technological advance in nursing, leading will depend mostly on thorough understanding of the elements involved. Nurses cannot—and should not—try to specialize in the technological results themselves. This should be left to the experts. But they should concentrate deeply into adapting in which areas and to what extent technological results can be utilized.(*1*)

Gertzog discussed the need for a radical restructuring of patient medical records: "what is at fault is not that a medical record system may be technologically behind the times, but that most medical record systems have conceptual frameworks that are archaic because they are static."(*2*) Technology will not improve the situation if we try to adapt present patient records to the computer. A drastic change is needed in the conceptual framework which is the basis for assessment and the design of the system.

A flowchart of a very familiar and simple procedure (TPR) demonstrates the nurse decision-making process (figure 6., p. 52). The traditional or manual processing of data includes all aspects of information handling and communication related to coordination and management of patient care (figure 7.). Computer-assisted information handling simplifies the process (figure 8.).

Kiaer summarized the need for and benefits of a systems approach in nursing:

> If we want to be prepared for technological advance in nursing, we must accept the whole idea of systems. We know this will demand a thorough effort from all of us in analyzing and systematizing every element in nursing. However, in my view the efforts will be worthwhile in the light of the major results: We will be able to separate the abstract parts of nursing from the concrete parts and thus reveal the elements most adaptable for automized equipment. Thereby, we will save time to concentrate on the very essential part of nursing, namely the human relations. Furthermore, an attitude based on the idea of a system will give us smoother elements in the hospital system. Finally, if the idea of systems is accepted by everybody in the hospitals, the cooperation most likely will be to the benefit of the most important people in the hospital: the patients.(*3*)

The real value of such systems will be realized when they are expanded beyond the hospital to other health care organizations.

Health Data Networks

National plans for the development of

Figure 6.—Flowchart of nurse decision-making process regarding TPR

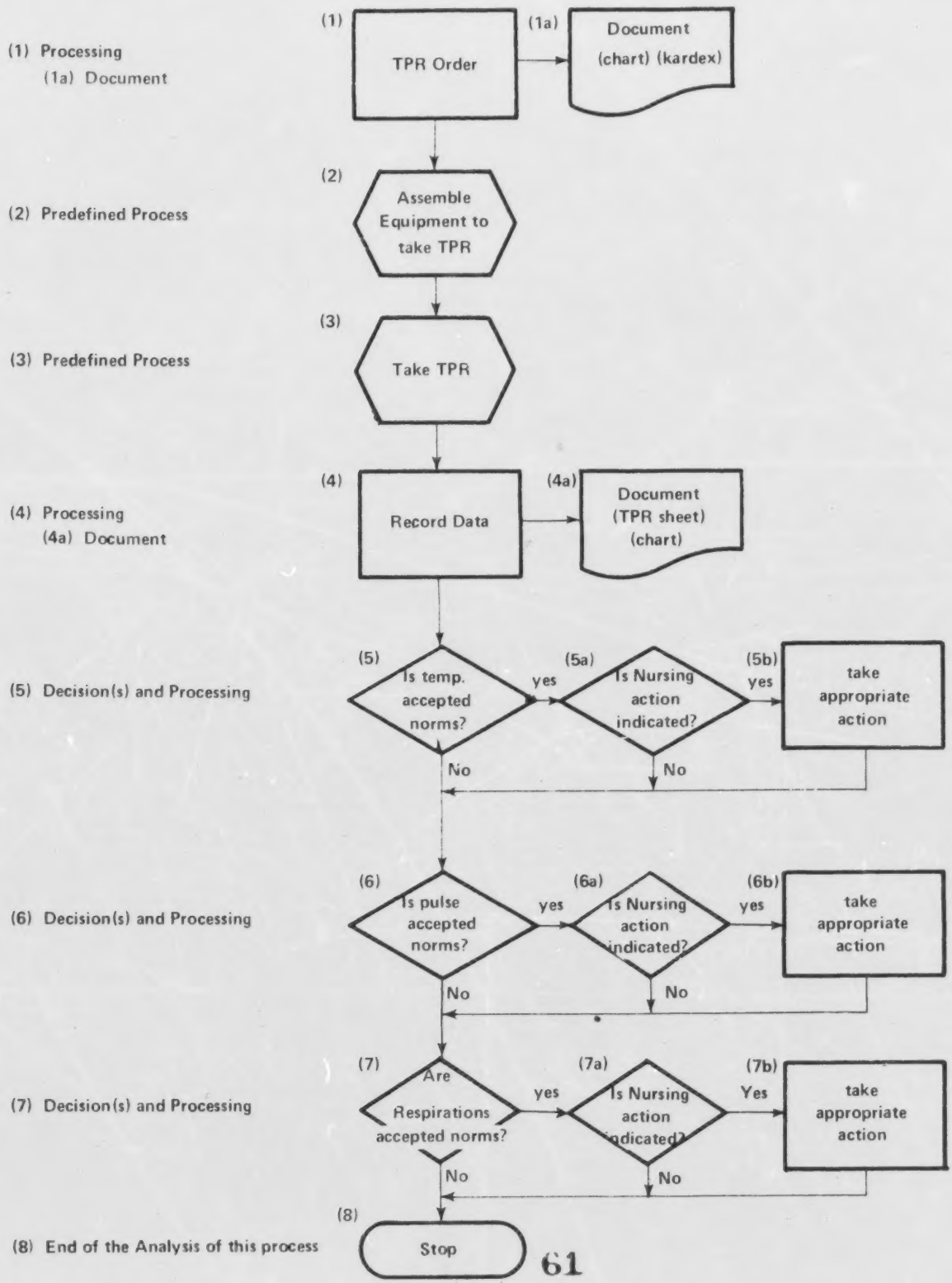


Figure 7.—Traditional manual information handling

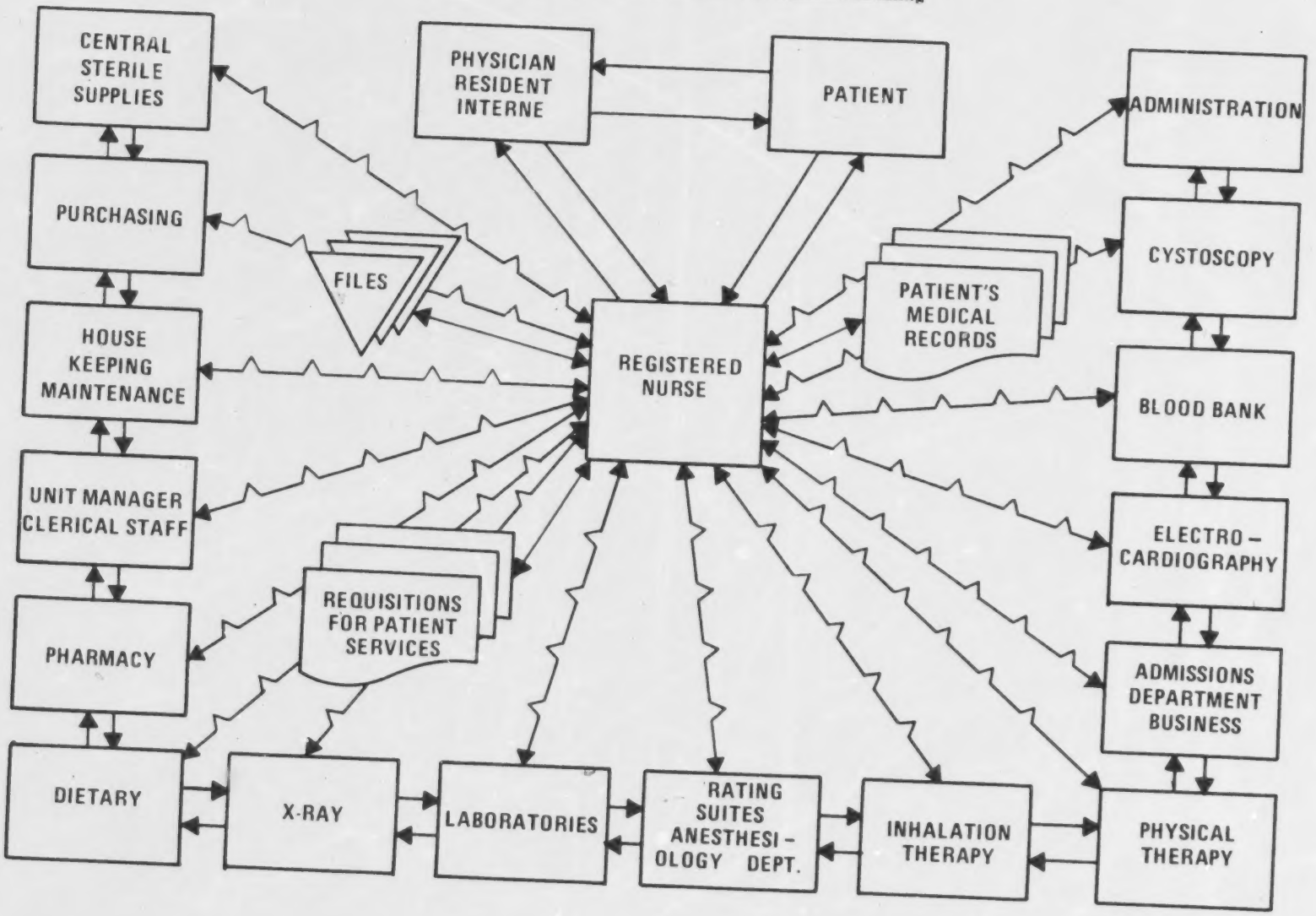
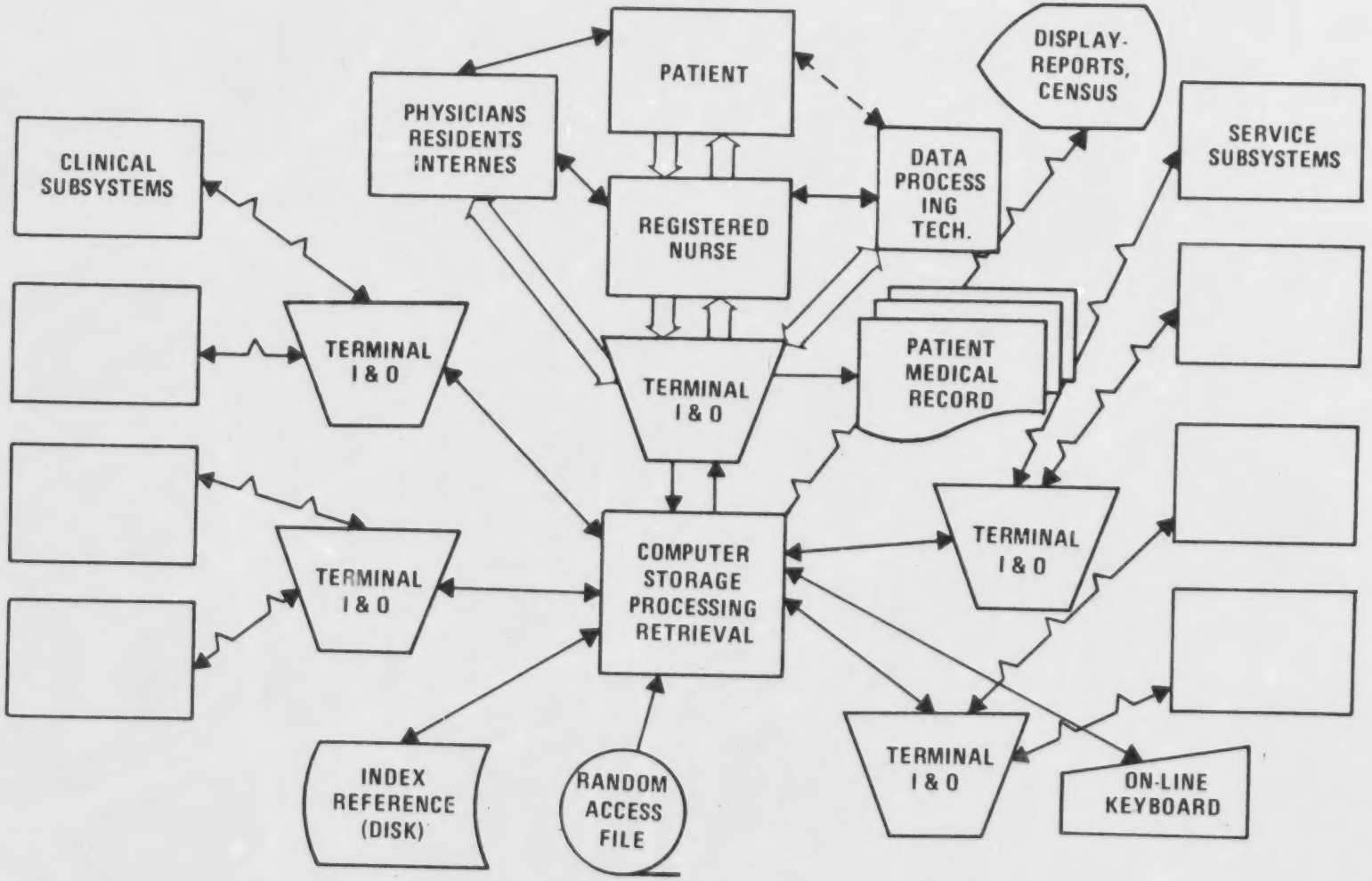


Figure 8.—Computer assisted information handling



health data network systems were identified by Vernan E. Wilson at a conference focusing on "Areawide Automation of Health Data:"

> We are proposing developmental projects in selected communities, states, and regions, designed to create modules of a cooperative data system that can be replicated and implemented throughout the nation in a later phase.
>
> Specifically this effort would include:
>
> - Community-wide health services data systems in selected communities;
> - Modules of operational systems for the collection of particular types of data;
> - State and regional models, aggregating both community-wide systems and specific modules of data systems.
>
> Obviously these represent preliminary steps in a long process. Additional legislative authority and substantial investments of funds will be required to build and sustain the system on a nationwide scale.(4)

The concept of a community-wide health service data system has been approved by the Erie County Medical Society. This system, "The Western New York Health Data Network," is spearheaded by Elemer Gabriele, M.D. (5) In order to benefit from modern data technology, the systems of the various institutions must be designed to allow program languages to be interfaced. Community planning is needed to facilitate transferring health records of patients from one institution to another.

Application of Project Assessment Forms

The project staff believe that the forms developed during their study can be implemented by any health care institution or agency. The forms could be part of a manual record or could be adapted for an on-line information system. With minor changes, the forms could be used for mark-sense or optical scan input.

The "Nursing Assessment: Transfer Summary" form was developed by the project staff in cooperation with members of the nursing committee of the Western New York Health Data Network. The form was designed for use by nurses in summarizing patient status at the time of discharge from any health care agency within the community. The "Recovery from Anesthesia" form has been used effectively in several hospitals as a paper form. The "Basic Patient Information" form could be used as an admission tool.

The paper forms would be valuable teaching tools for preparing nurses to systematically assess patients and record significant patient data. The experience of working with systems which demand considerable structuring of content and clearly defined meanings of terms would be valuable to nurses.

The importance of implementing a systematic tool for data assessment is crucial. Dr. Wilson stated:

> How well we handle the problem of data-gathering and data-sharing will determine in large measure our success or failure in handling the challenge of health care.(6)

The Forms as Tools.—Although the project staff believe that the nursing assessment forms developed during this project will improve communications, there is no guarantee as the forms are only tools. This fact is supported and illustrated in the following analogy:

> The stethoscope is a device consisting of a tube . . . which bifurcates at one end. Attached to the bifurcated ends are small ear-fitting devices. . . . Attached to the other end are variously designed cone or disk shaped devices. . . . The stethoscope was designed to detect sound and may be used for this purpose. It is also a device which the physician can use to help him deliver quality care to his patients. There is no assurance, however, that its use by a physician or others will result in better care for the patient.
>
> The medical record is a device consisting of a set of documents in which data and information are recorded, and which are filed in a storage area. The documents may be hard copy, film, magnetic tape, punchcards, or other. The recorded data may be graphic or alpha-numeric in form. The medical record was designed to note information concerning the patient and may be used for this purpose. It is also a device which the physician can use to help him deliver quality care

to his patients. There is no assurance, however, that its use by a physician or others will result in better care for the patient.(7)

Assessment of Computer Applicability.— One of the goals of the project was to develop forms which could be adapted to computer applications. Although it was originally anticipated that simulation could be done at the study hospital, the hardware was not installed during the contract period. Therefore, the project staff requested an evaluation of the forms by John L. Muerle, Ph.D., Principle Engineer, Computer Research Department, Cornell Aeronautical Laboratories, Buffalo, New York. Dr. Muerle, a highly qualified expert in the field of computers, analyzed the forms and submitted a full report to the project staff in February 1970. His report follows.

An Analysis of the Applications of Nursing Data Forms to a Computer-Implemented Hospital Information System

John L. Muerle, Ph.D.

Under United States Public Health Service Contract Number PH 108–69–17, the School of Nursing of the State University of New York at Buffalo has developed a set of forms to capture data from which can be extracted patient care information for making nursing decisions. An additional requirement on these forms is that they be computer manageable. However, a computer-implemented hospital information system is not now immediately available for use in evaluating the computer manageability of the forms. The following analysis of these forms is presented to show their applicability to a computer-implemented system and peripheral benefits derived from their generation and use.

One of the difficulties in attempting to apply computer technology to areas where medicine is practiced is the vast difference between the relatively structured format of data required by a computer-controlled system and the normally very unstructured and personally defined format of data accumulated by the medical practitioner. When data to be processed by a computer are not well structured, the amount of processing necessary to arrange that data in a format suitable for use by other parts of the system may be too great to be economical. In addition, all of the data collected may not be required by the system, but, in unstructured form, they must all be processed first to extract the pertinent data from those of no value to the system. This extra processing is added expense for the system. Further, accumulating data in an unstructured format is relatively inefficient since the context of that data must be added each time the data are inscribed, even though that context may be essentially the same for many circumstances.

If data are available in a definite format—on a form—they are immediately more effectively applicable to a computer-implemented system than if they were unstructured. Thus, the nursing data forms in question are indeed applicable to a computer data processing system. Further, the preliminary analysis performed to determine what data should be captured by the forms and the subsequent use testing and modification of the forms has validated the need for the data under present circumstances. And finally, the forms provide a number of additional benefits both to a computer-implemented system and to any data user. These benefits include:

1. The context of the data to be captured by the forms is precisely defined by the forms themselves, thus saving additional nonproductive writing when data recording is required.
2. Between the forms and their user manuals, the medical terminology of the data to be captured is standardized so

that communication between users is unambiguous.

3. With a fixed data format, data analysis over long time periods, over many different institutions, and over different patient populations can be efficiently carried out to extract from that data information previously unavailable because of the difficulty of access and the great variety in meaning and structure.
4. When the structure, context, and terminology of data are standardized through the use of forms, storage of the data is much more efficient since they can be highly coded.
5. When forms are used to record data, the data are much more accessible since the location of each data item is known and meaning can be much more easily extracted from a position where only a check mark is required or where the forms provide additional context, as opposed to a narrative recording of all the data in an unspecified sequence.

Since the nursing data forms could not be used with a functioning computer-implemented hospital information system, specific questions on their applicability to the computer system cannot be answered. However, even if a functioning system were available and these questions could be answered, if the forms were then used with a different system the answers with that system might be different. A few of these questions will be discussed below to provide a better perspective for the forms.

Do these forms arrange to capture just the data which are needed and only the data which are needed? The study leading to the development of these forms established the requirements for the data, but two sources of information on if and how to modify the forms must come from a functioning system. First, the design of the system will determine whether some other data source in the system captures data identical to that on the nursing data forms, and those data can be deleted from the forms, or some other data requirements prescribe additional data items for the forms. Second, once the system is functioning, needs for data not yet captured or lack of use of data being captured will dictate modifications to the forms. But a need for the data on these forms has been derived, and a data format suitable for computer input has been developed.

Will the specific format of these forms be suitable for computer input? Whether data to a computer-implemented hospital information system ever become pen strokes on a paper form or only key strokes on a keyboard terminal depends upon the design of the computer system. It may be that the forms will appear only as images on a cathode-ray tube display to guide the keystroke entry of the data. The forms might be modified with coding numerals next to every data item to guide a keypunch operator at a central data input center. But the fact that they define the essential data items still remains, and the modifications to their physical format will be relatively trivial.

Can the cost of implementing these forms on the computer system be estimated and can the cost savings through the use of these forms be established? It is difficult enough to estimate cost of implementation and cost savings when a system is well defined; therefore any cost estimates associated with the nursing data forms would be most difficult to derive and of small value were they derivable. However, the development of these forms has immediate value:

1. Only data which serves a useful medical function is on the forms, so the time wasted in taking data or making notes which *might* be useful is eliminated.
2. The improved legibility of the data speeds its interpretation and may introduce other efficiencies in the nursing processes associated with the forms.
3. A formal location for the data captured by the forms encourages the retention and preservation of the data. This data may then be the source of improvements to the system whether it be computer assisted or not.

Whether the cost of programming the support for capturing the data on the forms in a computer-implemented system is returned in

improved system operation can only be determined after the total system design is developed or, possibly, only after the system has been functioning for a while. For instance, the cost of programming for these forms may not be returned directly in significantly lower nursing costs, but the data may be instrumental in supporting a significant decrease in cost per patient day in a hospital with a computer-implemented information system.

In conclusion:

1. Since structured forms could be developed for nursing data, these data are applicable to a computer-implemented hospital information system.
2. The forms themselves provide significant benefits both when applied to a computer system and if used in a manual system.
3. Whether the data captured by the nursing data forms are exactly those required by a computer-implemented hospital information system, what is the cost of implementing these forms for the system, and what are the cost savings derived from the use of the forms can be determined only when the complete system is defined or, possibly, only after the system has been functioning for a period of time long enough to evaluate the significance of the data to the system.

(End of report)

Deterrents to Computer Implementations

Considerable progress has been made in the development of computer-assisted information systems which are capable of processing patient data obtained by all members of the health care delivery system. However, there is a lag between development of the potential for and implementation of data processing.

General Physical Deterrents

A number of deterrents to development of the type of computer-assisted information system envisioned by the project staff have been identified by researchers Huffman, Gonveia and Barnett: (*8,9*)

- Adaptation of the computer to patient care activities is difficult.
- Experience and research in computer applications in this area are limited.
- Personnel skilled in systems analysis, programing and computer operations are in short supply.
- Distortion or loss of information caused by the inflexibility of predefined, rather rigid classification and coding of data is frequent.
- Computer reliability requirements are stringent. (Although reliability has improved significantly in recent years, the computer is not a 100 percent reliable instrument.)
- Difficulties are attendant when nontechnical personnel (with a high turnover rate) use a computer system on a round-the-clock basis.
- Most administrators are too busy meeting the constant crises of every day operation to plan effectively for the future.
- Initial costs are very high and often stagger hospital administrators.
- Cost-benefit savings are difficult to demonstrate.
- Salaries of the computer personnel are a concern.

Cost as a Deterrent

Cost is in many instances the crucial deterrent to implementation of computer systems. The initial investment is particularly costly and operational expenses are high. There is a hesitancy to discuss cost factors because implementation is considered so crucial. McLaughlin commented at the Congress of the International Council of Nurses:

> I must caution you that I am not going into the economics of computer applications at this point. Some economic justification is required somewhere along the line, but I feel that we must be a bit utopian first. Also, the changes that will result from various computer applica-

> tions are such that the whole base for determining costs will change.(*10*)

Within the past few years, technological advances have decreased the costs of computers. However, only very large medical centers can justify purchase of a computer, as it must be operated at full capacity 24 hours a day, 7 days a week if cost savings are to be realized. Time-sharing has allowed hospitals to buy time from large computer service companies and pay on the basis of actual time required to process data. Many smaller hospitals or agencies are now able to take advantage of computer technology.

In order to assess the increased cost of a computer-assisted information system, a realistic analysis of the cost of manual information handling is needed. Hoffman *et al.*(*11*) commented:

> It is possible to determine the cost of the computer system, but hospitals have little or no documentation of the cost of their present information processing technics. This expense probably is much higher than we appreciate.

It has been estimated that one-sixth of the nursing budget or approximately 5 percent of the hospitals' expenses is used to manually handle physicians' orders.(*12*) Jydstrup and Gross(*13*) found that information handling comprises about one-fourth of hospitals' operating costs. They strongly recommend revision and streamlining of information forms and operations. An appendix to their study lists 15 ways to improve information handling in hospital nursing units.

Dr. Barnett discussed cost factors in two recent articles.(*14*) He stated that, at present, it is difficult to defend the installation of a large-scale information system on the basis that it will reduce the cost of patient care. If the experience of other industries is repeated in hospitals, the use of computers will not reduce total medical-care costs, but will lead to more effective use of the resources at hand and to improved patient care.

It may be as Eugene Smith, Director of Nursing at Charlotte Memorial General Hospital, stated, "We can't afford *not* to have computer-assisted systems."(*15*)

Reactions of Personnel to Computer Implementations

The Impact of Change

A number of the difficulties encountered when computers are brought into the system of information handling are related to personnel opinions, hesitancies, and reactions to change. In his bestseller, *Future Shock*,(*16*) Alvin Toffler described the rapid acceleration of change which is occurring today and will continue to occur in the future. Failure to cope with or adapt to change results in the condition Toffler describes as "future shock."

Alvin Zander(*17*) noted that resistance to change is a common phenomenon because change is often uncomfortable and makes the future ambiguous and uncertain. Resistance to change can be reduced if people develop an awareness of the need for change and of the fact that their feelings of resistance are permissible and acceptable. This awareness should then be followed by development of a plan for overcoming feelings of resistance and hesitancy. Change will then be more comfortable.

Innovations in technology are frequent and often extensive. People must not only adapt to these innovations, but must also become knowledgeable and direct the innovations into beneficial paths. It is noted in *Transition to Automation* that "historically, technological advance has been both a disruptive and a creative force, generating strong emotionalism of unreasoned fears and exaggerated claims which traditionally has accompanied such advance."(*18*)

A Study: Employee Attitudes Toward Automation

Lipstreau and Reed conducted a before and after study on the attitudes of employees toward automation in a large bakery.(*19*) Among their cited observations, the following are pertinent to the health situation:

- When planning automated transition, management should expect a sharp decline in employee morale level soon after the changeover.

- Employee morale will fall more quickly and deeply under conditions involving mixed automation than under conditions involving an even level of technology throughout all departments.
- Morale will fall most quickly and precipitately among employees who lose their old departmental identity and/or suffer the greatest disruption of their informal group relationships.
- Attitudes of female employees will fall to a lower level than those of male employees.
- Delays in scheduled transition dates will produce a downturn in morale.
- Employees are extremely sensitive during the transition period. Management's lack of empathy and/or apparent concern for employees during the change period, and the subsequent low points of the morale level, will act as a longrun depressant of general employee attitudes.
- After the depth of the morale plunge is reached, the morale upturn will be ratchet-like, exceedingly sticky and seldom, if ever, reach the prechange level.

Nurses' Attitudes Toward Automation

Nurses' attitudes toward a new hospital setting were investigated.(*20*) The initial reaction of the nurses to the new situation was one of dislike, particularly for the altered social interaction patterns which resulted from the architectural design of the new hospital. However, after 4 months in the new setting, the nurses developed more positive attitudes.

The writers are unaware of any studies which focused directly on attitudes of nursing personnel toward computer-assisted information handling. However, personnel reactions have been noted in published articles and workshop presentations. The project staff encountered a number of nurse reactions toward computers in general and computers in health care institutions in particular.

Nurses' Attitudes Toward Computers

The attitudes of nursing personnel toward computers ranged from complete dislike and frustration to active support and enthusiasm. The negative attitudes noted by the investigators stemmed from a number of sources, among them:

- personal experiences with computer processing of magazine subscriptions, banking accounts, or department store bills;
- newspaper and magazine articles and cartoons focused on problems resulting from the use of computers;
- the negative aspects of accurate and unbiased radio, television, and movie accounts of computer applications; and
- a lack of awareness of the benefits derived from the use of computers such as the tremendous feats of the space program, the ability to make rapid flight or hotel reservations anywhere in the world, and credit, telephone, and banking systems.

Many people think of the computer as an electronic brain, a robot, or a think machine with abilities superior to those of the people who control them. People fail to realize that the computer is only a tool and that errors result from human input as well as from computer mechanical failures.

Concerns About the Use of Computers

The reactions of hospital and agency personnel to the use of data processing systems for information handling in the delivery of health care were, in general, positive. The personnel felt that reducing the incidence of repetitive recording and the quantity of clerical tasks was desperately needed. They did, however, express concern about several aspects of a computer-assisted information system.

The Role of the Nurse.—The effect of a computer system upon the role of the nurse was feared by some who felt there would be nothing left for nurses to do. Others envisioned expansion of the nurses' role because of the increase in quantity and quality of information about patients and their responses to illness, therapy, and nursing care.

Similar feelings were identified by other

researchers. Delores Carriker at the Institute for Living reported:

> The fear has been expressed that computers will intrude in the relationship with the patient and have a dehumanizing effect on patient care. After five years of experience with computers at the Institute for Living, we have found just the opposite to be true . . . the computer is a valuable tool that is capable of recording, recalling, and correlating more information about patients than was ever possible in the past . . . it helps us to establish a more effective relationship with him. But it is a tool. It has not replaced anyone.(*21*)

A statement by Dr. Clark further assured the continued need for nurses:

> Automation offers many exciting ways of improving medical care. We must remember, however, that a computer has no judgment. It cannot think, it has no personality, and in no way can it practice either medicine or nursing.(*22*)

Legality.—The legal issues of computer-recorded-and-maintained information and the lack of nursing or medical personnel signatures on the records were a concern. Roy N. Freed discussed the legal aspects of computer use in hospitals:

> *Negligence.*—Computer use for recordkeeping could minimize the occurrence of negligent acts, thereby reducing legal liability in practice by preventing harm.(*23*)
>
> *Recordkeeping Requirements.*—Hospitals using a computer for record maintenance must comply with any legal and other requirements on documentation of treatment authorizations, laboratory reports, and other events, if it seeks to abandon traditional paper work. . . . Designers of hospital systems are planning to have special code identifications for doctors' use at input terminals, to be entered through a keyboard or by an embossed wafer-like credit card, in lieu of signatures, with reasonable expectations that the requirement will be changed.(*24*)
>
> *Evidence.*—The maintenance of hospital records in forms unique to digital computer systems and unreadable by sight does not diminish their admissibility as evidence in litigation . . . that much evidence generated in the hospital of the type that is of probative value will be more accurate when it is collected and recorded either by machine or by people for a machine system.(*25*)

Confidentiality.—Means of maintaining the confidentiality of data was questioned. Considerable personal information would be stored in the computers and control of access to that data was a concern. Safeguards would need to be built into the computer system. John L. Muerle noted several actions which could be taken: (*26*)

- Deal with a reputable firm of systems and computer experts;
- Control access to the room housing the data processing equipment;
- Design the terminals so that a key is needed to operate them; and
- Devise a method of identifying each person to the computer prior to the input, change, or retrieval of data.

Muerle also stated that:

> The individual medical records in a computer implemented system are probably more secure than their paper counterparts lying on an open shelf in a nurse's station waiting return to the records room or residing in a half-open file in a doctor's office while the doctor and his receptionist nurse are working in a backroom treating a patient.(*27*)

Necessary Attitude Development

Acceptance and utilization of a computer-assisted information system is dependent upon the development of several attitudes within the health care system, namely:

- Health personnel should become cognizant of the basic concepts related to on-line computer-assisted information systems.
- Each group in the health team should identify their information needs and collaborate in integrating the data.
- There must be a willingness to change from traditional ways and to try new approaches.

- Personnel must be willing to share information and responsibility.
- Personnel must be aware that most errors are human rather than computer malfunctions.
- Strong administrative leadership and support is an absolute necessity.

Many fear that the computer is dehumanizing and will cause depersonalization of patient care. This is not true. Instead, the computer should reduce dull, repetitive tasks and endless paperwork and give nurses more time for direct patient care.

Summary

The implications for future computer applications in institutions and agencies were discussed as was the need for community and regional planning for health data networks. The transition from manual record systems to automated information systems requires strong leadership, commitment and perseverence.

Problems involved in introducing automated information systems into the delivery of health care were identified and described. The major concerns are the cost of automated information handling, legal aspects, maintenance of confidentiality of data, and reactions of personnel toward technology and the use of computers in health care institutions.

Cost, legal considerations and personnel reactions are unavoidable factors in any change situation. Although they are possibly of greater magnitude in implementation of information systems, hopefully, they will not deter progress.

If hospital administrators, nursing administrators, systems engineers and programers are aware of the potential deterrents, strategies can be developed which will assist people in coping with them and plans for the implementation of computer applications can minimize the adverse effects.

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Chapter 6

Summary, Conclusions, Applications, and Recommendations

Summary

Members of the project staff have developed a systematic method of nursing assessment which employs forms structured for adaptation to a computer-assisted information system. During the first 18 months of the study, the staff identified information needed by nurses planning care for patients hospitalized for surgery. Data collection tools or forms were constructed for use in several phases of patient care: admission, pre-operative, recovery from anesthesia, and post-operative.

During the second 18 months, the staff identified information needed by community health nurses who were planning care for patients and families in the home setting. Data collection tools were constructed for use in several aspects of care: basic family information, patient progress in terms of physical status, medications, treatments and diet therapy, verbal and nonverbal behavioral patterns, and family interactions and activities. A cycle of information flow was assured with the construction of a transfer summary for use with patients transferred from one health agency to another (figure 9, p. 66).

The content of the nursing assessment forms was tested throughout the project period. Additional field testing of some forms was carried out. The tools developed for hospitalized surgery patients were tested on nonsurgical adult patients and found to be adequate. The tools do not, however, contain the information necessary for specialty services such as maternity and psychiatry or for the assessment of normal growth and development of children. The community health nursing assessment tools were found adequate for patients with a wide range of diseases and/or conditions.

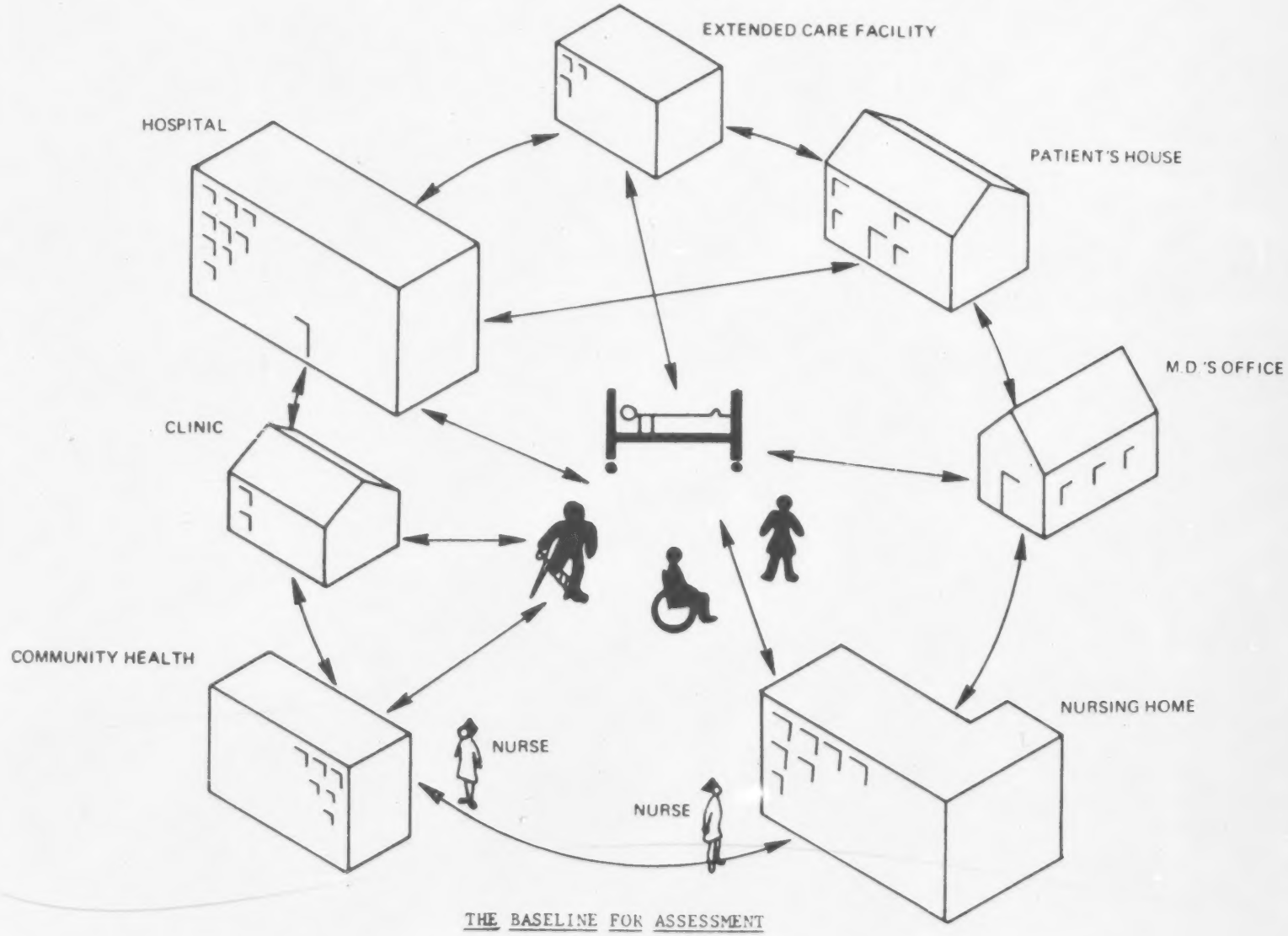
Conclusions

The following project objectives were met: (1) the sociocultural, psychological, and physiological patient information nurses need for decision-making was identified, and (2) structured tools for collecting the data were developed.

The structured forms were designed for easy adaptation to an automated system. It was not possible to test the forms in a computer system. John L. Muerle, Principal Engineer, Computer Research Department, Cornell Aeronautical Laboratories, Buffalo, New York, and a former consultant to the Director of the Clinical Information Center at the Edward J. Meyer Memorial Hospital was asked to critique the forms. He judged the data applicable to a computer implemented information system and the forms beneficial to both computer and manual systems.

Several difficulties were encountered in the attempt to simulate a computer system with a paper system. The major problems were related to the need to indicate patient progress over time and selection of family member information to be included in the community health assessment forms. These problems were only partially resolved.

Figure 9.—Flow of patients, services and data in a health care delivery system.



Future Applications of the Forms

Nursing Practice

The Basic Patient Information, Recovery from Anesthesia, Transfer Summary, and Clinic Summary forms could be used as parts of paper systems. They can also be used during the period of implementation of a computer-assisted information system. The Basic Patient Information form has been an aid to part-time personnel in preparation for treating patients admitted during their absence.

Nursing Research

The assessment forms could be used as data collection tools by nurses and others conducting research. Uniform, legible data, easily recorded and accessible, is one of the greatest needs in nursing. Without this data, it is impossible to conduct research that will expand the knowledge base for nursing. The writers believe that the nursing assessment tools could provide the needed data if they were used for an extended period of time.

Nursing Education

The structured design of the forms provides a list of terms which describe phenomena to be observed. The list serves as a "tickler file" for the practitioner and, therefore, as an ongoing, on-the-spot educational tool.

The manuals of instruction include definitions of each term or phrase. Practitioners involved in testing the tools believe the manuals are a source of information for practitioners and will help to standardize communication among them.

Following completion of the current project, the writers will investigate the use of the project tools as a basis of methodology for teaching nursing assessment in each of the major patient care settings: hospital, extended care facility, and the home. Concurrently, they will evaluate the effectiveness of the tools in relation to decisions made in planning and implementing patient care.

Computer Programers

The forms, with their structured format and clearly defined terms, could serve as a source document for systems analysts and data processing programers who convert the information to computer-manageable language. The types of computer programs to be developed depend on the information to be processed, the types of terminals used, and the storage, processing, and retrieval capabilities of the system.

Recommendations

A limited pilot study of the use of assessment tools with hospitalized patients indicated that the content was appropriate to decisions made in developing a plan of care. However, a more extensive study should be conducted to establish the reliability and validity of terms and the adequacy of data.

The tools should be evaluated in a hospital and in a community health agency. The data should be studied in conjunction with decisions made and care given; their pertinency to the patient's condition or his response to therapy should be evaluated. If possible, the content of the forms should be tested in an agency with a functioning on-line real time information system such as the Medi-Data project at Charlotte Memorial Hospital in Charlotte, North Carolina.

The following questions pertinent to computer implementation can be answered only if the forms are tested in a completely functioning system:

- What information would be retained as nursing input?
- How can nursing input be interfaced with input from others involved in health care?
- What is the value of the information for decision-making?
- What information needs to be available at certain time periods, and what are these time periods?

- What information needs to be temporarily stored?
- What information needs to be permanently stored on-line or by other storage means?
- What information needs to be retained for future reference? Should only transfer or other summary information be retained?
- What information should be available and to whom?
- What information needs to be retained for legal purposes?
- What information could be input by the patient and/or family member?
- What type of input, storage, and retrieval devices would best accommodate the information?
- What would be the feasibility and the cost of including the proposed clinical information in a computer-assisted system?
- What orientation programs would be needed to implement such a system?
- Who would input the data?
- If a nonnurse inputs the data, should it be validated by the nurse?

Many institutions or agencies are planning to implement an electronic data processing system that would include nursing input of clinical information about patients. Studies, such as the one by Ramon Alonso, Ph.D., described below, will aid in the transitions to new information systems.(*1*)

Dr. Alonso recommends investigation of the following matters prior to or after implementation of the data processing system:

- Investigate prior to implementation:
  - Do other hospital groups (e.g., doctors, administrators, patients) perceive any discrepancy between the present nurse role and the nurse role which should exist?
  - Can predictions be made as to which nurses will accept the new data processing system most readily?
  - What are nursing personnel attitudes toward professional and nonprofessional issues, and what information do they possess about data processing?
  - How will the hospital structure accommodate the changes?
  - What are nursing personnel perceptions of present and preferred roles?
- Investigate after implementation:
  - Can information be developed that will identify nurses who will best adjust to the introduction of data processing?
  - Do rumors generated prior to the introduction of the data processing system help or hinder nurse adjustment?
  - What effect does the introduction of a data processing system have on the overall hospital structure?
  - Does any strain or dissatisfaction immediately generated by the introduction of the data processing "work itself out" over time?
  - Does any stress on or *dissatisfaction* of nurses, generated by the introduction of the data processing focus upon relevant hospital issues, spill over and affect attitudes toward general professional and nonprofessional issues?
  - What action should be taken to:
    - Decrease nurse dissatisfaction or strain due to role conflict?
    - Facilitate nurse acceptance of data processing?
    - Reorient nurse, administrator, doctor, and patient conceptions of the role of a nurse under the conditions of a "new technology?"

In conclusion, those who have been involved in planning for the use of computers are well aware of the very extensive planning and systematizing that must take place before such equipment can be of any use. This project should assist in clarifying the elements of reporting patient-family health/illness data and result in identification of the concrete elements as opposed to the abstract elements of nursing. Concrete elements are those which are adaptable for use with technological equipment such as computers.

Communication of patient-family information makes it possible for more people to cooperate in the treatment of a patient. A systematic analysis has revealed that recur-

ring information could easily be transferred in a concrete form, thereby easing communication of vital patient-family data among all members of the health professions.

The writers believe that the significant data for making nursing decisions about patient-family care have been identified. Finding effective ways of communicating and disseminating the plans generated by such decisions is the next giant step.

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Glossary

Automation.—A communication system, an on-line, real time computer assisted information system into which data can be input, processed, and retrieved on a total time basis.

Baseline data.—Data obtained at time of initial contact and used as a measure for comparison with future data on the same nature.

Cathode-ray tube.—An electronic vacuum tube containing a screen on which information may be stored by means of a multiple modulated beam of electrons.

Community health nursing.—The application of concepts and knowledge from the science of public health and nursing to individuals, families, and groups in the community setting.

Computer-manageable.—The arrangement of data in standardized and objective terms so that it is adaptable to electronic data processing methods.

Computer technology.—The use of devices capable of accepting information, applying prescribed processes to the information and supplying the results of these processes.

Cybernetics.—The field of technology involved in the comparative study of the control and intracommunication of information handling, machines, and nervous systems of animals and man in order to understand and improve communication.

Data processing technicians.—Specially trained personnel skilled in the operation of data processing equipment.

Debug.—(1) to locate and correct any errors in a computer program.
(2) to detect and correct malfunctions in the computer itself.

Electronic data processing.—Processing of information by means of electronic equipment, such as, a computer.

Feedback.—The part of a closed loop system which automatically brings back information about the condition under control.

Generalizability.—To give general applicability to; e.g., the content of the forms are appropriate to patients admitted for care with any illness or condition.

Hardware.—The physical equipment or devices forming a computer and peripheral equipment.

Health data network.—A system to handle complete health data collection and distribution by use of computers and communication technics in order to share information among many individual systems installed in separate locations.

Information handling.—The recording, copying, summarizing, computing, transmitting, disseminating, storing, and retrieving of information, either oral, written, or electronically processed.

Input.—Information or data transferred or to be transferred from an external storage medium into the internal storage of the computer.

Interface.—A common boundary between parts of systems or parts of a single system.

Machine language.—A system for representing and communicating information or data between people and machines. Such a system consists of a carefully defined set of characters and rules for combining them into larger units, and rules for word arrangement or usage to achieve specific meanings.

On-line.—The user deals directly with the computer through a terminal such as a teletypewriter or a cathode-ray tube.

Out-put, printout.—The information transferred from the internal storage of a computer to any external device.

Paper system.—A record system that uses paper forms for recording data and transfering information to others.

Patient needs.—Presence or absence of something which, if persistent, may impair or terminate life or health.

Port-a-punch cards.—Paper cards punched in a pattern that has meaning and can be sensed mechanically, usually hand punched rather than keypunched by machine operators.

Professional nurse.—Any individual who has satisfactorily completed a course of study and passed the examination for licensure as a registered nurse in any State.

Real time.—Implies that the user of the terminal is in direct communication with different areas of the hospital, and that the computer receives data, processes transactions, and returns results so as to affect patient care and administrative decisions.

Retrieval.—The recovering of desired information or data from a collection of documents, other graphic records, or an on-line system.

Role.—The part the nurse assumes in fulfilling the responsibilities and activities of nursing.

State-of-the-patient.—The objective and subjective signs, symptoms, and conditions as observed or obtained about the patient.

Storage.—The storage of data in a device that is an integral part of a computer, or externally in a form prescribed for use by the computer.

System theory.—The organization of components into systemic relationships.

Teletypewriter terminal.—A computer terminal that is designed with a keyboard to input data.

Time-sharing system.—Several groups share computer processing time and storage of data.

Unit manager.—An administrator at the ward or unit level who assists the nurse by management of the nonnursing aspects of the unit.

Update.—To change information in a file by bringing it up to date. During the checkout period, the updating run deletes and adds programs, corrections, test data, etc. to the master program file.

Appendix A

Description of Study Hospitals and Agencies

Edward J. Meyer Memorial Hospital

Edward J. Meyer Memorial hospital is a large general hospital of 877 beds maintained by Erie County to provide medical services to all residents of Erie County irrespective of their ability to pay for their care. The medical services are organized under the following six major clinical areas: General Medicine, Obstetrics, Surgery, Pediatrics, Neurology, and Psychiatry plus a large outpatient department. (See figure A1, page 75.)

It is used for clinical experience by all students from the schools in Health Sciences from the State University of New York at Buffalo.

All staff physicians at the hospital are either clinical associates or faculty in the School of Medicine. Similarly, many of the nursing staff are clinical associates in the School of Nursing and several faculty members have joint appointments.

Erie County Department of Health

A brief description of the structure of the Erie County Department of Health and the areas served by the community health nurse is included in this report to clarify the role of the nurse and her responsibilities for communication of patient data at the present time.

The project staff met several times with Miss Mary Arnim, Assistant Director, Erie County Department of Health, Central Office, City Hall. The forms and policies related to maintaining patient records currently used in the Erie County Department of Health were reviewed. The geographic areas served by the nurses; the location of the 10 offices in each district of the county; and the sociocultural and economic status of the families predominant in each of the 10 decentralized nursing service areas of the county were explained to the project staff. (See figure A2, page 76.)

The professional nurses are responsible for maintaining a large number of comprehensive patient records, most of which are administrative rather than patient oriented. (See figure A3, page 77.)

The nurse completes a very detailed form for Medicare, Medicaid, Blue Cross/Blue Shield or other insurance coverage benefits. The professional nurses also interview the patient and family to determine the economic status and the fees to be charged for skilled nursing care and home health aide care whenever a patient needs these services. A sliding fee scale is provided the nurse who makes the decision concerning the fee to be paid by those patients who do not have insurance coverage for such services.

A Family Folder file card, individual patient record, family health and social record and nurse's observations record are maintained on all active cases. Two mark-sense IBM cards are used by the nurses to record each visit to a patient and record data about the "Clinics-Conferences-Schools," which the nurses are responsible for in each area. This information is used by the county and the New York State Health Department to determine budgetary and personnel needs. Two copies of each card is required; one copy is sent to Albany. In addition, another form is used by each nurse to record the Daily Report of Home Health Visits to send in to Central Billing. Nurses do not collect fees

directly from the patient but must report the services provided in order for fees to be collected.

The Associate Director indicated that an addressograph system, which would relieve the professional nurses of recording all "Header" data as often as an estimated 30 to 40 times on each patient, was not considered feasible due to the decentralized administration set-up and present policies of the Erie County Department of Health.

The project staff were dismayed by the amount of data recorded and replicated by hand on each of the forms maintained in the district offices with duplicate copies of several forms sent to the central office in City Hall, as well as to the New York State Health Department.

The potential benefits of an automated system approach as a means of reducing the amount of time and effort now spent by nurses in maintaining records cannot help but be recognized by those who are concerned about the utilization of health manpower and the delivery of health services in a more efficient and effective way.

Visiting Nursing Association of Buffalo

The Visiting Nursing Association of Buffalo is a voluntary agency whose objectives are: (1) to provide skilled nursing and other therapeutic services directly for patients not requiring continuous nursing care and to provide such other services as may from time to time be necessary to give efficient care to the sick; (2) to teach home nursing, hygienic living, and proper care of children; (3) to stimulate community responsibility for the health of the community; and (4) to cooperate with official, social and government agencies to this end.

The geographic area covered by the Visiting Nursing Association is divided into four divisions, each headed by a supervisor. These divisions include the city of Buffalo, town of Tonawanda, Lackawanna, West Seneca, parts of Amherst and parts of Cheektowaga.

The agency staff is composed of public health nurses, registered nurses, physical therapists, licensed practical nurses, homemaker-home health aides, and clerical personnel. In order to utilize more effectively the skills of the staff members, team nursing was initiated in 1967. All care is rendered under the direction of and in consultation with physicians. (See figure A4, page 78.)

Figure A1.—Administrative chart of the study hospital

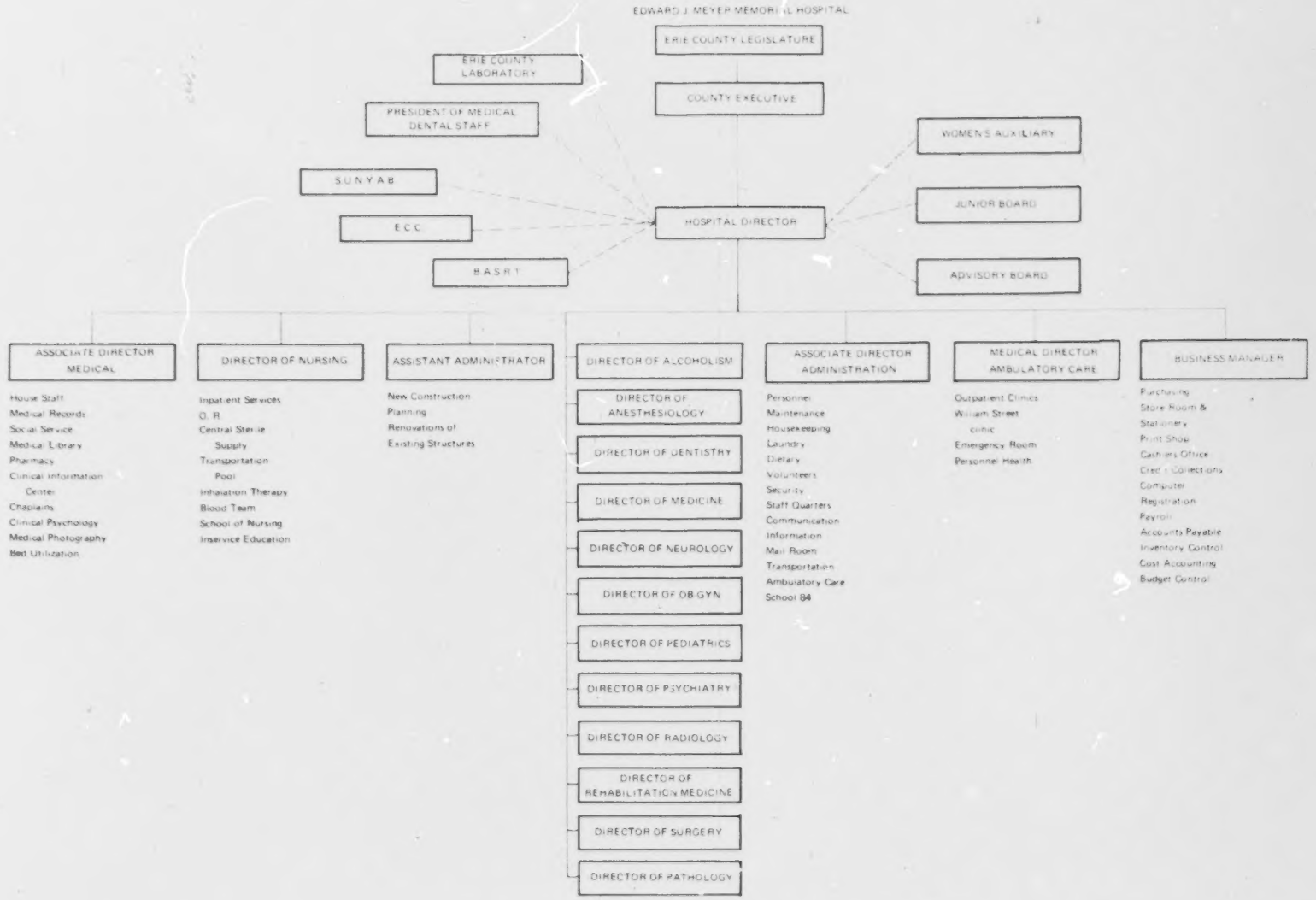


Figure A2.—Ten district offices (decentralized administration)

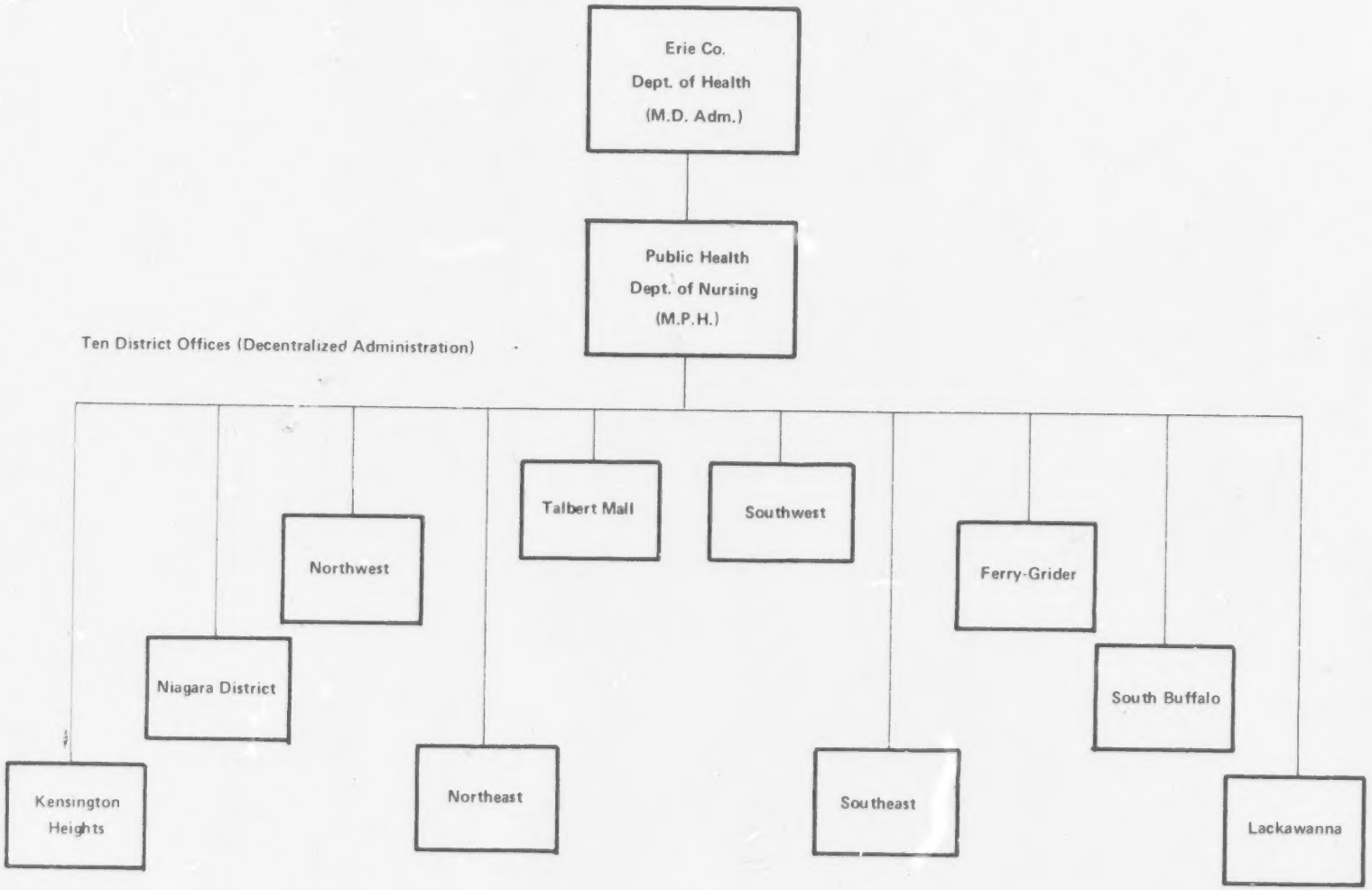
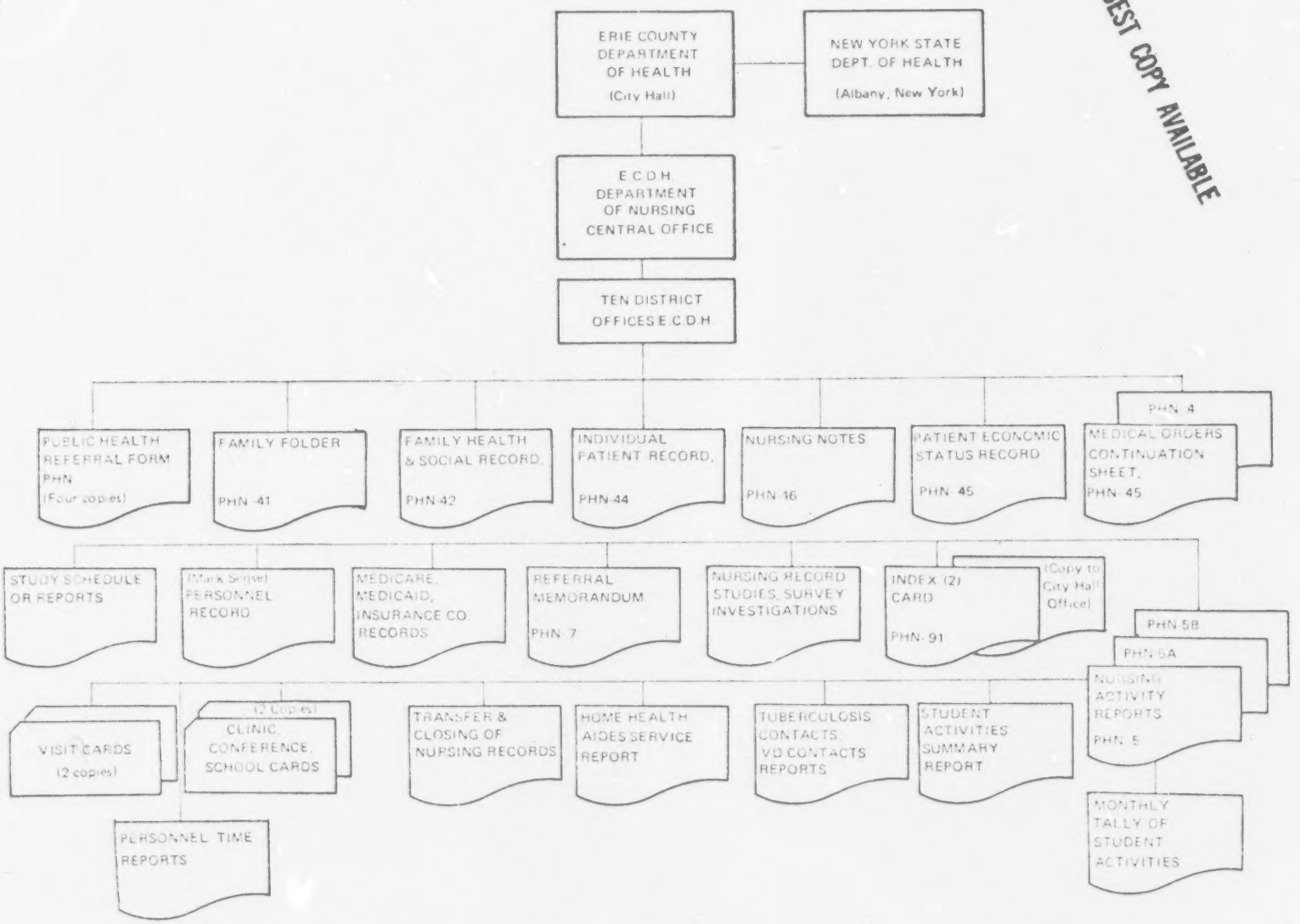
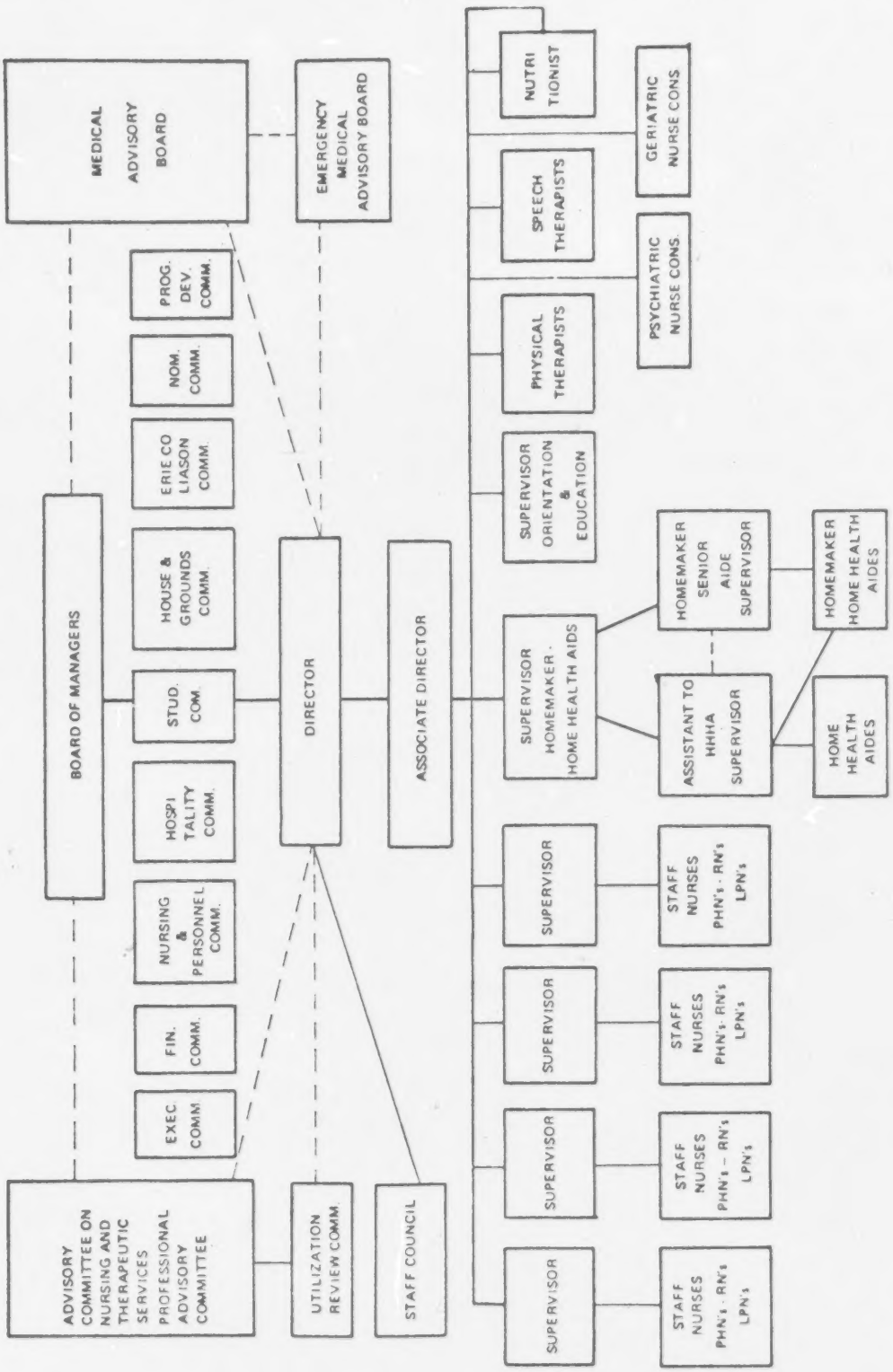


Figure A3.—Nursing records and administrative records


ERIE COUNTY DEPARTMENT OF HEALTH (City Hall)
NEW YORK STATE DEPT. OF HEALTH (Albany, New York)
E.C.D.H. DEPARTMENT OF NURSING CENTRAL OFFICE
TEN DISTRICT OFFICES E.C.D.H.
PUBLIC HEALTH REFERRAL FORM PHN (Four copies)
FAMILY FOLDER PHN-41
FAMILY HEALTH & SOCIAL RECORD PHN-42
INDIVIDUAL PATIENT RECORD PHN-44
NURSING NOTES PHN-46
PATIENT ECONOMIC STATUS RECORD PHN-45
PHN-4
MEDICAL ORDERS CONTINUATION SHEET PHN-45
STUDY SCHEDULE OR REPORTS
(Mark Sense) PERSONNEL RECORD
MEDICARE, MEDICAID, INSURANCE CO. RECORDS
REFERRAL MEMORANDUM PHN-7
NURSING RECORD STUDIES, SURVEY INVESTIGATIONS
INDEX (2) CARD PHN-91
(Copy to City Hall Office)
PHN-5B
PHN-5A
NURSING ACTIVITY REPORTS PHN-5
VISIT CARDS (2 copies)
(2 copies)
CLINIC, CONFERENCE, SCHOOL CARDS
TRANSFER & CLOSING OF NURSING RECORDS
HOME HEALTH AIDES SERVICE REPORT
TUBERCULOSIS CONTACTS, VD CONTACTS REPORTS
STUDENT ACTIVITIES SUMMARY REPORT
MONTHLY TALLY OF STUDENT ACTIVITIES
PERSONNEL TIME REPORTS

BEST COPY AVAILABLE

Figure A4.—Organizational chart



Appendix B

Members of Committees

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MARY BOLES, R.N., M.Ed., Associate Professor, Mental Health-Psychiatric Nursing

KATHRYN J. CERATO, R.N., M.A., Associate Professor, Maternal Health

ALTHEA M. GLENISTER, R.N., M.S., Associate Professor, Community Health

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MARY C. HARREN, R.N., M.S., Associate Professor, Mental Health-Psychiatric Nursing

DONNA M. JUENKER, R.N., M.Ed., Associate Professor, Child Health

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RUTH G. WALSH, R.N., M.A., Professor, Adult Health

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Erie County Health Department

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MARY STORY, R.N., B.S., Supervisor, Niagara District

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RITA JUTZIN, R.N., Staff at Depew

Visiting Nursing Association of Buffalo

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C. STEIN, R.N., B.S., Orientation and Inservice

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L. ELLIOTT, R.N., Staff, Team Leader

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T. D. MILLER, R.N., B.S., Staff, Team Leader

S. EBERLE, R.N., Staff

Appendix C

Nursing Assessment Forms and Manuals for the Hospitalized Patient

User's Manual for Hospital Nursing Assessment Forms

Introduction:

These forms are not questionnaires and should not be used as such. The forms have been designed as guides for assessing patient problems and serve as tools for recording significant data essential to planning the nursing care of the patient. Each nurse using the forms should become familiar with the content prior to seeing the patient.

To acquaint the personnel with both the content and design of the forms, manuals have been prepared for each form which include specific instructions and definitions of the terms used.

The set of forms was designed primarily to serve as source documents for programers to develop the flow charts and instructional programs needed for the input of patient information obtained by the nurse into a hospital information system. However, the project writers believe that the forms as presented could be used as a paper system during an interim period of changeover to an electronic data processing system. Also, some of the forms might well be used presently as a paper system, such as, the Basic Patient Information, Recovery from Anesthesia, and the Transfer Summary forms.

The set of forms was designed to collect physiological, psychological and social data about the adult patient who is admitted to the hospital primarily for surgery. Therefore, the content identified was pertinent and appropriate to each phase of patient care during hospitalization.

1. Nursing Assessment: Basic Patient Information (Form 0001)
   This form is to be filled out immediately following the patient's admission to the patient care unit. The data to be recorded is, in general, constant patient data; i.e., that data which is not expected to change during the course of the present hospitalization.

2. Nursing Assessment: Patient Progress (Form 0002)
   This form is to be filled out immediately upon admission to the patient care unit and throughout the patient's hospitalization both preoperatively and postoperatively.

3. Nursing Assessment: Recovery from Anesthesia (Form 0003)
   This form is to be filled out during the immediate postoperative recovery from anesthesia.

4. Eight-Hour Intake and Output (Form 0004)
   This form is to be filled out for any patient whose intake and output is to be recorded frequently and accurately.

5. Nursing Assessment: Transfer Summary (Form 0005)
   This is a multipurpose form to be used for discharge planning and communication of patient data to any receiving nurse, agency, or institution.

General Instructions for Use:

1. Complete the forms, Basic Patient Information and Patient Progress as soon after the patient is admitted to the patient care unit as possible.
2. If the patient is unable to talk or understand your questions, complete as much of the information as you can under the given circumstances. If a family member or reliable source of information is available, gather as much information as possible from him.
3. Stamp the patient identification data, write in, or paste label from computer center in the space provided in the upper right hand corner of each separate page.
4. Record the time the assessment is done and the date, if different and not included with patient identification data, in the spaces provided at the top of page 1 of each form.
5. Select the term or terms within each section which best describes the patient. Most of the terms in the forms reflect deviations from "normal," and are, therefore, significant in identifying the patient's needs. If, in your judgment, there are no terms listed which describe the status of the patient, write an appropriate term or phrase in the space following "other." It is assumed that if nothing is recorded in a section, there is nothing of significance, at the time, to record about the patient in this area of concern.
6. The form, Recovery from Anesthesia, is to be completed by the nurses in the recovery room.
7. Resume recording on the patient's Progress Record following his return from surgery.
8. Use Intake and Output worksheet if accurate recording of fluids is indicated.
9. The Transfer Summary form is to be used when it becomes evident that the patient will need followup care by another institution or agency. It should be completed by the nurse who is knowledgeable about the patient's condition and care status. Discharge planning should start early; much of the form could be filled out at any time during the patient's confinement and the "transfer" status completed at the time of discharge.

HOSPITAL _____

NURSING ASSESSMENT: BASIC PATIENT INFORMATION

ADMISSION TIME _____ DATE _____

PATIENT'S IDENTIFICATION _____

1. GENERAL ADMISSION INFORMATION

MODE:	ACCOMPANIED BY:	SOURCE OF DATA:
walking ☐	family ☐	patient ☐
wheelchair ☐	friend ☐	family ☐
stretcher ☐	no one ☐	_____ other

PRIMARY LANGUAGE (If not English) _____

DIFFICULTY WITH ENGLISH IN RELATION TO

speaking ☐

understanding ☐

comments _____

2. PRESENT ILLNESS

Instructions: Check first box for single term or first double term, check second box for second term

Reason for present admission _____

Primary signs/symptoms:

blurring/double vision ☐☐	fatigue/weakness ☐☐	pain ☐
chills/fever ☐☐	heart burn/indigestion ☐☐	pruritis ☐
cough ☐	incontinence ☐	voiding difficulty ☐
		weight loss/gain ☐☐
cyanosis ☐	injury/trauma ☐☐	L.M.P. _____ Date
diarrhea/constipation ☐☐	insomnia ☐	Site of discharge _____ bleeding _____
dysphasia ☐	jaundice ☐	
S.O.B./dyspnea ☐☐	loss of appetite ☐	
edema/swelling ☐☐	nausea/emesis ☐☐	

DURATION: _____ hrs. _____ days; _____ weeks _____ mos. _____ yrs.

LOCATION _____

SEVERITY _____

comments

3. PREVIOUS HOSPITALIZATION(S)

NONE ☐ NUMBER _____ LAST ADMISSION reason and date _____

PREVIOUS ADMISSION in this hospital: No ☐ Yes ☐ reason/date _____

FEELINGS ABOUT NURSING CARE strongly positive ☐ positive ☐ neutral ☐

negative ☐ strongly negative ☐ Why liked/disliked? _____

comments

4. ALLERGIES

NONE KNOWN ☐

	DRUGS	FOOD	OTHER
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____

comments

5. MEDICATION(S) HISTORY

MEDICATION(S) TAKEN ROUTINELY: None ☐

	name or reason	freq.	last dose
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____

comments:

DRUG(S) WITH PATIENT? No ☐

sent home	1 2 3
given to staff	1 2 3
with patient	1 2 3
_____ other	1 2 3 (circle)

FORM 0001

1 of 3

HOSPITAL _____

NURSING ASSESSMENT: BASIC PATIENT INFORMATION

PATIENT'S IDENTIFICATION _____

6. CHRONIC HEALTH PROBLEMS

None known ☐

(a) Diabetes ☐ (d) Hypertension ☐ (g) Epilepsy ☐

(b) Heart Disease ☐ (e) Arthritis ☐ (h) Amputation ☐

(c) Emphysema ☐ (f) Ulcer ☐ (i) _____ other

RESTRICTED ACTIVITIES (specify) _____

Comments _____

7. RESPONSE TO ILLNESS(ES)

to indicate which disease(s) the information pertains (Sect. 6), place the letter(s) of disease(s) in the box(es) following statement(s). Place a check mark to indicate which information pertains to present illness.

PERCEPTIONS OF SIGNS/SYMPTOMS:

denies presence of	☐	☐	☐
preoccupied with	☐	☐	☐
has misconceptions	☐	☐	☐
inadequate information	☐	☐	☐
_____ other	☐	☐	☐

Unable to evaluate ☐ ☐ ☐ comments _____

PERCEPTIONS OF PROGNOSIS:

complete recovery	☐	☐	☐
partial recovery	☐	☐	☐
to die	☐	☐	☐
doesn't know	☐	☐	☐
no change	☐	☐	☐

8. SUPPORTIVE AIDS

PROSTHESES:

DENTURES

upper ☐ lower ☐ partial ☐

leg	☐	☐
arm	☐	☐
breast	☐	☐
eye	☐	☐
_____ other	☐	☐

DOMINANT HAND:

Right ☐ Left ☐

AIDS TO MOBILITY:

crutches ☐ cane ☐ walker ☐ brace ☐ wheelchair ☐ _____ other ☐

comments _____

9. ELIMINATION

USUAL DEFECATION FREQUENCY

OD am/pm QOD am/pm (circle)

impacted ☐ other _____

date of last BM _____

AIDS USED AT HOME (name & frequency)

dietary _____

laxative _____

suppository _____

enema _____

URINATION:

Cciostomy ☐ deostomy ☐ _____ duration

No self-care ☐

frequency ☐ urgency ☐ nocturia _____ no. of times

INCONTINENCE:

total ☐ stress ☐

Comments _____

FORM 0001 2 of 3

HOSPITAL _____

NURSING ASSESSMENT: BASIC PATIENT INFORMATION

PATIENT'S IDENTIFICATION

10. SENSORY STATUS

VISION: rt lt
- uncorrected ☐ ☐
- severely impaired ☐ ☐
- blind ☐ ☐

Uses Aid(s): _____ (type)

Does not have glasses ☐

HEARING: rt lt
- severe loss ☐ ☐
- deaf ☐ ☐
- wears Aid ☐ ☐

_____ (type)

Does not have hearing aid ☐

TASTE:
- loss of taste ☐
- distorted ☐
- circle: dec./inc. ☐

SMELL:
- loss of smell ☐
- distorted ☐
- dec./inc. ☐

comments: _____

SPEECH:
- Slurring ☐
- Stuttering ☐
- Dysphasia ☐

Other _____

COMMUNICATION:
- Unable to speak ☐
- Unable to write ☐
- Sign language ☐
- Reads lips ☐

SENSE OF FEELING:

circle: dec./inc. sensitivity to:
- Heat ☐
- Pressure ☐
- Cold ☐

Locate _____

comments: _____

11. NUTRITION

HEIGHT _____

WEIGHT _____

USUAL APPETITE:
- anorectic ☐
- voracious ☐

comments:

SPECIAL DIET AT HOME:
- diabetic ☐
- low salt ☐
- bland ☐
- soft ☐

_____ other

RESPONSE TO DIET:
- Lack of understanding ☐
- Strong dislike ☐

_____ other

12. USUAL REST AND SLEEP PATTERNS

SLEEPING PATTERNS:

usual hours of sleep: (circle)

from _____ a.m. p.m. to _____ a.m. p.m.

insomnia ☐ Daily naps ☐

comments:

AIDS USED TO SLEEP (name & frequency):

position in bed _____

extra pillows _____

medication _____

food _____

other _____

_____

13. SOCIAL HISTORY

WORK

OCCUPATION _____

SHIFT evening ☐ night ☐

- Head of Household ☐
- Homemaker ☐
- Retired ☐
- Dependent ☐

INTERESTS/HOBBY
- radio ☐
- T.V. ☐
- reading ☐
- needlework ☐
- crafts ☐
- puzzles ☐

other _____

comments: _____

HOUSING

patient lives with
- no one ☐
- family ☐
- friend ☐

other _____
- nursing home ☐
- institution ☐
- single dwelling ☐
- multiple dwelling ☐
- walk-up ☐

Floor _____
- Bed & Bath on separate floor ☐
- Bath shared with other tenants ☐

other _____

comments:

14. VISITORS

NO VISITORS ANTICIPATED ☐

RESTRICTIONS DESIRED
- family only ☐
- no visitors ☐

other _____

comments _____

Manual

Nursing Assessment: Basic Patient Information (0001)

The purpose of this form is to provide the nurse with a guide for systematically obtaining the nursing history of a patient.

The content includes the reasons for the patient's admission to the hospital, chronic health conditions and problems, and social data considered helpful in planning the nursing care of each patient.

The form primarily includes the kind of information that is not expected to change during hospitalization, therefore, the form is not used for reassessment once it is completed.

This form in conjunction with the Nursing Assessment: Patient Progress form should be completed as soon as possible after admission to the care unit. The content from both forms provides the nurse with baseline data for comparison upon reassessment and serves as the basis for determining the progress and response of the patient to therapy (both nursing and medical) and to hospitalization.

The specific instructions and definitions of terms and phrases are included in this manual.

Specific Instructions:

1. GENERAL ADMISSION INFORMATION

Record:

(a) the mode of transportation by which the patient arrived on the unit

(b) the person (other than hospital personnel) who accompanied the patient to the unit

(c) the individual(s) giving information about the patient and his condition

(d) the primary language spoken by the patient if other than English. If he has difficulty with English, check "speaking" and/or "understanding" whichever is appropriate.

2. PRESENT ILLNESS

Reason for present admission—reason for this hospitalization and, if for surgery, record the date if known.

Primary signs/symptoms—the primary reasons the patient is being admitted to the hospital.

Double terms—if first term applies check first box. If both, check both boxes. If second term applies, check second box.

Duration—the length of time the patient has been aware of the signs and symptoms checked above.

Location—the site (if appropriate) of primary signs/symptoms.

Severity—the relative intensity of the signs/symptoms.

3. PREVIOUS HOSPITALIZATION(S)

None—no previous admission to a hospital.

Number—times the patient has been hospitalized.

Last admission—the reason and the date for the last previous admission to a hospital.

Previous admission to this hospital—the reason and date of the admission if different from above.

Identify the patient's feelings toward the nursing care he received during previous admissions, by checking the appropriate answer. Specify, in the space provided, the kinds of things he liked or disliked about his nursing care experiences.

4. ALLERGIES

Allergy—altered reaction of body tissues to a specific substance.

Identify the specific substance under the appropriate category.

5. MEDICATION(S) HISTORY

None—patient states he does not take any drugs regularly.

List the name, frequency and time of last dose of drug(s) taken regularly. If the name of the drug is not known, state the reason for which it is taken.

If the patient denies having drug(s) with

him, check no. If he does have drug(s) with him, indicate the disposition made of the drug(s) by circling the appropriate number following the correct answer for each drug listed.

6. CHRONIC HEALTH PROBLEMS

Record any chronic health problem(s) as reported by the patient.

Activities restricted—activities of daily living are restricted by chronic health problem(s); specify the limitations as described by the patient.

7. RESPONSE TO ILLNESS(ES)

See directions on the form.

Perceptions of signs and symptoms:

denies presence of—refuses to attribute obvious signs and symptoms to his illness.

preoccupied with—seems to be thinking about or wanting to discuss his signs and symptoms most of the time.

has misconceptions—incorrect ideas and beliefs about illness; misunderstands the meaning of signs and symptoms of illness.

inadequate information—lacking in knowledge about the disease and/or signs and symptoms.

unable to evaluate—if you cannot determine the patient's perceptions of his signs and symptoms, indicate if to a chronic illness or if to present illness.

Perceptions of prognosis:

Indicate how the patient perceives his recovery from any chronic health problem(s) or how he perceives his recovery from this illness.

8. SUPPORTIVE AIDS

Identify any aid(s) or prostheses which the patient uses routinely. If patient has no teeth or dentures, record "edentulous" under comments. Indicate dominant hand.

9. ELIMINATION

Defecation frequency—usual interval between bowel movements.

Circle the time of day the patient has a bowel movement beside the appropriate frequency.

impacted—a collection of hardened feces in the rectum or sigmoid.

Record the date of the patient's last bowel movement, prior to *this* assessment.

Aids used at home—anything used routinely by the patient to assist him to defecate. Indicate the type(s) and the frequency(ies) of the aids used.

dietary—specific food.

laxative—specific oral agent that acts to promote defecation.

suppository—solid medication introduced thru rectum to promote defecation.

enema—fluid introduced thru the rectum to promote defecation.

Colostomy—artifical opening into the colon.

Ileostomy—artificial opening into the ileum.

duration—length of time since the "ostomy" was done.

no self care—inability to care for the "ostomy" without considerable assistance.

Urination—the act of voiding urine.

frequency—voiding small amounts many times within 24 hours.

urgency—the need to void suddenly with inability to retain urine very long without acute distress.

nocturia—the number of times the patient voids during the night.

incontinence, total—inability to control urination at anytime.

incontinence, stress—inability to control urination when sneezing, coughing, laughing, changing position, etc.

10. SENSORY STATUS

Vision:

Check "rt" and/or "lt" to indicate which eye(s) has impaired sight or complete absence of sight.

incorrected—person who has impaired or defective vision who either has not had an eye exam or does not

have glasses that provide the proper correction.
severly impaired—vision is severly limited even with corrective means such as glasses, contact lenses, and/or surgery.
blind—complete absence of vision.
uses aid(s)—specify type of aid used to assist patient to function, such as, white cane, large print, braille, persons, etc.

If the patient does not have his glasses or contacts with him at the hospital, check the appropriate answer.

Hearing:
Check "rt" and/or "lt" to indicate which ear(s) has impaired hearing or complete absence of hearing.
severe loss—the patient hears with difficulty when spoken to in the usual tone of voice.
deaf—the patient is unable to hear the speaker even when spoken to loudly.
wears aid—the patient usually wears a hearing aid. Check in space provided if the patient does not have his aid with him.

Speech:
slurring—slovenly articulation of letters difficult to pronounce.
stuttering—defect in speech in which there is stumbling and spasmodic repetition of the same syllable.
dysphasia—impairment of speech resulting from a brain lesion.

Communication:
unable to speak—speech loss due to condition or illness.
unable to write—physical inability to write.
sign language—uses hand signals to communicate.
reads lips—able to identify words by observing lip movements of the speaker.

Taste:
loss of taste—individual is unable to distinguish sweet, sour, bitter, salt.
distorted—misinterpretation of tastes.
circle: increased—excessive acuteness of the sense of taste.
decreased—diminished ability to distinguish correct taste of foods or substances.

Smell:
loss of smell—unable to distinguish either pleasant or unpleasant odors.
distorted—odors considered agreeable are assumed to be disagreeable or unpleasant and vice versa.
circle: increased—a heightened sensitivity to odors.
decreased—a dulled sensitivity to odors.

Sense of Feeling:
circle: increased sensitivity to—a heightened sensitivity to sensory stimuli, such as pressure, heat and cold.
decreased sensitivity to—lessened sensibility to sensory stimuli, such as pressure, heat and cold.
locate—if more than one term applies, indicate to which part of the body each term refers.

11. NUTRITION

height—record the patient's height in feet and inches or in centimeters if metric system is used.
weight—record his weight in pounds or kilo's if metric system is used.
usual appetite—customary level of desire for food.
anorectic—the patient lacks a desire for food.
voracious—the patient has a huge appetite.

Check the type of prescribed therapeutic diet the patient has been eating at home. If the patient does not eat certain foods for religious or cultural reasons, write in the foods not eaten under "other."

Response to Diet:
lack of understanding—insufficient knowledge of the reasons for the diet or of the diet itself.
strong dislike—definite negative feelings about the type of diet or specific foods included on the diet.

12. USUAL REST AND SLEEP PATTERNS

Usual hours of sleep—customary time the patient goes to bed and the time he arises.

Daily naps—one or more short periods of sleep almost every day in addition to regular hours of sleep.

Insomnia—chronic inability to sleep; sleep is prematurely ended or interrupted by periods of wakefullness.

13. SOCIAL HISTORY

Occupation—type of work or activity for which one is remunerated; job.

evening shift—working hours begin in the late afternoon and end in the late evening or midnight.

night shift—working hours begin in the late evening and end in the early morning.

Head of Household—individual has *primary* responsibility for self and dependents.

Homeaker—individual manages a household.

Retired—individual no longer pursues his usual occupation.

Dependent—individual relies on others for financial and/or physical support.

Interest/Hobby—note the kinds of pastime activities enjoyed most by the patient which he might be able to do during this hospitalization.

Housing: Patient lives with—

no one—alone.

family—individuals of common ancestry.

friend(s)—an acquaintance(s) who does not have a common ancestry.

nursing home—private (or maybe public) facility to care for patients.

institution—public establishment to care for dependent individuals.

single dwelling—only one family living under one roof.

multiple dwelling—two or more families living under the same roof.

walk-up—stairs are the only means of reaching floors above ground level. If walk-up is checked, record the floor on which the patient lives.

bed and bath on separate floors—stairs must be used to go from the bedroom to the bathroom.

bath shared with other tenants—patient and family do not have a private bath.

14. VISITORS

No visitors anticipated—the patient does not expect any visitors during this hospitalization. Under "comments," indicate the reason.

Restrictions desired—the patient desires his visitors restricted. Identify the name or title of those who *may* visit, if not identified below.

family only—the patient wishes all visitors excluded except his family.

no visitors—the patient wishes *all* visitors excluded.

other—the patient wishes specific individuals excluded. Indicate by name or by title the person(s) to be restricted in the space provided.

NURSING ASSESSMENT: PATIENT PROGRESS

HOSPITAL _____

PATIENT INFORMATION

DATE			
HOSPITAL P.O. DAY			
TIME			

DATE			
HOSPITAL P.O. DAY			
TIME			

1. VITAL SIGNS

BLOOD PRESSURE	Systolic			
	Diastolic			
TEMPERATURE O R A (circle)				
PULSE/min.	radial			
	apical			
	irregular	☐	☐	☐
	bounding	☐	☐	☐
	weak	☐	☐	☐
	imperceptible	☐	☐	☐
	other	☐	☐	☐
RESPIRATIONS/min.				
	non-rhythmic	☐	☐	☐
	labored	☐	☐	☐
	rales	☐	☐	☐
	wheezing	☐	☐	☐
	shallow	☐	☐	☐
	short of breath	☐	☐	☐
	other	☐	☐	☐

2. RESPIRATORY AIDS

	none	☐	☐	☐
OXYGEN	flow	____ l/min.	____ l/min.	____ l/min.
	nasal	☐	☐	☐
	mask	☐	☐	☐
	tent	☐	☐	☐
	trach collar	☐	☐	☐
TRACHEOSTOMY	cuffed	☐	☐	☐
	not cuffed	☐	☐	☐
	mist	☐	☐	☐
	suctioned	☐	☐	☐
VENTILATOR	rate/min.			
	controlled	☐	☐	☐
	assisted	☐	☐	☐
	other	☐	☐	☐

*AMOUNT/SEVERITY = 1 small/occasionally
2 moderate/frequently
3 copious/most of the time

3. EENT

R=right L=left	blurring	☐	☐	☐
	diplopia	☐	☐	☐
PUPILS	dilated	☐	☐	☐
	unequal	☐	☐	☐
	pinpoint	☐	☐	☐
	do not react to light	☐	☐	☐
	tinnitus	☐	☐	☐
	nasal discharge	☐	☐	☐
	nosebleed	☐	☐	☐
	throat irritation	☐	☐	☐
	other _____	☐	☐	☐
MOUTH	dry	☐	☐	☐
	not clean	☐	☐	☐
	coated tongue	☐	☐	☐
	reddened	☐	☐	☐
	bleeding	☐	☐	☐
	foul odor	☐	☐	☐

4. COUGH*

	acute	☐	☐	☐
	chronic	☐	☐	☐
	hacking	☐	☐	☐
	non-productive	☐	☐	☐
SPUTUM	green	☐	☐	☐
	yellow	☐	☐	☐
	blood-tinged	☐	☐	☐
	gray	☐	☐	☐
	viscous	☐	☐	☐
	not deep-breathing	☐	☐	☐
	other _____	☐	☐	☐

5. POSITION IN BED

	legs elevated	☐	☐	☐
	side only	☐	☐	☐
	semi-Fowlers	☐	☐	☐
	Trendelenberg	☐	☐	☐
	other _____	☐	☐	☐

NURSING ASSESSMENT: PATIENT PROGRESS

HOSPITAL _____

DATE			
HOSPITAL/P.O. DAY			
TIME			

DATE			
HOSPITAL/P.O. DAY			
TIME			

6. SKIN*

flushed
pale
cyanotic
jaundiced
perspiration

LOCATION

rash
bruise
reddened
weeping
dry/itching
mottled

LOCATION

size/cm (approx.) _____
depth/cm (approx.) _____
other _____

7. EXTREMITIES*

R=right
L=left
B=both
A=arm
D=leg

NO distal pulses
paresthesia
limited movement
paralyzed
swelling
edema
weakness
hand grip weak
contractures
muscles spasms
tremors
missing
other _____

8. GENITALS*

L.M.P. DATE ___/___/___

DISCHARGE
white
yellow
spotting
foul odor
other _____ _____

9. RESPONSE TO FOOD/EATING

WEIGHT

nausea
anorexia
refuses to eat
distention
diff. swallowing
distorted taste

SPECIAL DIET _____

SMALL INTAKE OF:
fluids
food
other _____

10. ELIMINATION*

EMESIS
bile
undigested food
bloody
liquids
other

BOWEL
bowel movement
constipated
diarrhea
involuntary
impacted

URINARY
cloudy
dark orange
pink
red
bladder distended
scanty amount
not voiding
dysuria
incontinent
frequency
urgency
other _____

*AMOUNT/SEVERITY = 1 small/occasionally
2 moderate/frequently
3 copious/most of the time

FORM 0002

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NURSING ASSESSMENT: PATIENT PROGRESS

HOSPITAL _____

PATIENT INFORMATION

DATE			
HOSPITAL/P.O. DAY			
TIME			

11. WOUND*

- inflamed
- hematoma
- gaping

DRAINAGE
- serous
- sero-sanguineous
- sanguineous
- muco-purulent
- bile
- fecal matter
- urine

_____ odor

other _____

12. CAST/TRACTION*

describe/locate _____

DRAINAGE
- sanguineous
- sero-sanguineous
- purulent
- odor

- pale
- cyanotic
- cold
- swelling

other _____

13. DRAINAGE TUBES*

A. N/G	B. Foley	C. H'vac	Use letters/tubes opposite related term(s).
D.	E.	F.	

- not patent
- suction
- gravity
- irrigated

- cloudy
- pink
- red
- dark amber

- clots
- viscous

other _____

*AMOUNT/SEVERITY = 1 small/occasionally
2 moderate/frequently
3 copious/most of the time

14. ACTIVITY LEVEL

- bed only
- dangles only
- chair only
- BRP only
- room only
- one level only
- ambulates

other _____

15. AIDS TO MOBILITY

- crutches
- cane
- walker
- brace
- wheelchair
- person(s)

other _____

16. RESPONSE TO ACTIVITY*

- dizziness
- faint
- fatigued

- short of breath

other _____

17. PAIN*

R=right
L=left
B=both

- incisional
- chest
- abdominal
- lower back
- calf of leg
- head

- sharp
- aching
- cramp-like
- throbbing

- constant
- intermittent

not relieved by therapy

other _____

FORM 0002

NURSING ASSESSMENT: PATIENT PROGRESS

HOSPITAL _____

DATE			
HOSPITAL/P.O. DAY			
TIME			

DATE			
HOSPITAL/P.O. DAY			
TIME			

18. MENTAL STATUS*

lethargic			
confused			
disoriented			
inattentive			
forgetful			
unresponsive			
other _____			

19. SPEECH COMMUNICATION*

reticent			
evasive			
verbose			
stuttering			
slurring			
unable to speak			
other _____			

20. OBSERVED BEHAVIOR*

restless			
crying			
withdrawn			
underactive			
combative			
abusive			
noisy			
other _____			

21. SOCIAL RESPONSE*

wants to be alone			
doesn't want to be alone			
UPSET BY: family			
UPSET BY: visitor(s)			
UPSET BY: roommate(s)			
UPSET BY: staff			
other _____			

*AMOUNT/SEVERITY = 1 small/occasionally
2 moderate/frequently
3 copious/most of the time

22. FEELINGS EXPRESSED BY PATIENT*

depression			
nervousness			
anger			
fear			
wants to die			
undersired changes due to illness			
other _____			

23. PERCEPTIONS OF ILLNESS* - PATIENT

misconceptions			
inadequate information			
refuses to talk about illness			
preoccupied with illness			
denial			
other _____			

24. PERCEPTIONS OF PROGNOSIS* - PATIENT

complete recovery			
no change			
to die			
doesn't know			
partial recovery			
other _____			

25. COMMENTS

26. SIGNATURES

Instructions: sign your name under column of date you recorded.

(1.) _____ R.N.

(2.) _____ R.N.

(3.) _____ R.N.

FORM 0002

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Manual

Nursing Assessment: Patient Progress (0002)

The purpose of this form is to facilitate the recording of significant patient data, which, in conjunction with the Basic Patient Information, will reflect the patient's status on admission to the hospital and show his progress during hospitalization. It contains information primarily related to the care of any adult with medical or surgical problems.

Instructions:

1. Start a form as soon as the patient is admitted to the patient care unit.
2. Fill in the date, the hospital day and postoperative day (if the patient had surgery) in the space provided.
3. Record the time of assessment in the appropriate column at the top of the page. (The exact time might be determined by the nurse according to the patient's condition, or by hospital policy, or a committee.)
4. The initial assessment is baseline data; subsequent assessments update the information.

1. VITAL SIGNS

Blood Pressure:

Record the systolic and diastolic pressure readings in the spaces provided under the appropriate time column.

systolic—the pressure existing in the large arteries at the height of the pulse wave.

diastolic—the pressure existing during relaxation phase between heart beats.

Temperature O R A:

Record the degrees of body temperature in the appropriate time column. Circle the letter to indicate which method the temperature was taken: O—oral, R—rectal, A—axillary.

Pulse/min:

Record the pulse rate in the appropriate time column.

irregular—variation in the force and frequency of the pulse.

bounding—the volume of the pulse reaches a higher level than normal, then disappears quickly.

weak—the pulse lacks a feeling of fullness and definite beat; thready.

imperceptible—the pulse taken at site indicated cannot be felt or heard.

Respirations/min:

Record the number of respirations per minute in the space under the appropriate time column.

nonrhythmic—the breathing of the patient is marked by an irregular pattern.

labored—breathing which involves active participation of accessory inspiratory and expiratory muscles.

rales—bubbling sounds heard in air cells or bronchial tubes.

wheezing—difficult breathing accompanied by whistling sounds.

shallow—the rise and fall of the chest and abdomen is minimal.

short of breath—shallow and rapid respirations.

2. RESPIRATORY AIDS

Oxygen:

flow—l/min.—record the rate at which oxygen is being administered to the patient. If discontinued by the next assessment, record a zero under the appropriate time column.

nasal—oxygen administered via cannula inserted through the nose.

mask—oxygen administered via device covering the mouth and nose.

tent—oxygen administered via device covering the patient in bed.

tr collar—oxygen administered through

device attached to the tracheostomy tube.

Trach:
An artificial opening in the trachea usually for the insertion of a tube to facilitate breathing.
cuffed—inflatable balloon around the outer cannula of the tracheostomy tube.
no cuff—no balloon around the tracheostomy tube.
mist—method of administering moisture or medication in very fine droplets.
suctioned—the act of sucking up secretions through a catheter from the pharynx or trachea-bronchial tree by the reduction of air pressure.

Ventilator:
If the patient is on a ventilator, write in the type used and indicate the rate per minute in the space provided.
controlled—the ventilator is used to provide respiratory function for the patient.
assisted—the ventilator is used to assist the patient with respiratory function.

3. EENT
blurring—something perceived as vague or lacking definite outline.
diplopia—double vision; seeing of one object as two.
Pupils:
dilated—enlargement of pupil; average diameter is 4 to 5 mm.
unequal—difference in size of one pupil in comparison to the other.
pinpoint—marked constriction.
do not react to light—does not contract when exposed to strong light.
tinnitus—ringing sound in the ears.
nasal discharge—secretion from nose.
nosebleed—bloody discharge from nose.
throat irritation—a subjective complaint (may appear reddened on inspection).

Mouth:
dry—lack of saliva; fine cracks in surface of lips or mucous membrane within the oral cavity.
not clean—collection of mucus and food particles around teeth and gums and/or adhered to mucous membrane.
coated tongue—a thick furry covering of the tongue; may be variously colored.
reddened—mucous membrane within oral cavity and gums appear inflamed.
bleeding—usually occurs in gums around teeth.
foul odor—offensive odor; bad breath.

4. COUGH
acute—severe with rapid onset and a short course.
chronic—of long duration.
hacking—a frequent, short cough.
nonproductive—dry cough; does not raise any exudate or sputum from the bronchi or lungs.
Sputum:
Select the term that most appropriately describes the color.
not deep-breathing—lack of voluntary inspiration of sufficient amount of air to expand the lungs to their maximum capacity.

5. POSITION IN BED
Indicate either the restriction or that which is most comfortable for the patient if there is no restriction in movement.

6. SKIN
flushed—redness of the face and neck.
pale—lack of color; pallor.
cyanotic—bluish or grayish cast to the skin.
jaundiced—yellow color of skin or the sclera of the eyes.
perspiration—secretion of sweat glands.
Location: (Specify the area affected.)
rash—any eruption of the skin; usually a shade of red.
bruise—superficial discolorations due to hemorrhage into the tissues from ruptured vessels.

reddened—diffuse red discoloration of the skin.
weeping—oozes a watery secretion.
dry/itching—rough and scaly skin; a teasing irritation of the skin that arouses the desire to scratch the area.
mottled—marked with blotches of different shades of color.
size/cm (approx), depth/cm (approx)—specify as accurately as possible the size and depth of the area affected. If measuring device can be used to measure the depth and diameter, record the exact size and depth, if not, give approximate figures.

7. EXTREMITIES

Place the code letter(s) of the extremity(ies) to which you are referring in the appropriate column.
no distal pulses—the pulse cannot be obtained by compressing the arteries at the points farthest from the heart in any of the extremities.
paresthesia—abnormal sensation without objective cause such as numbness, prickling and tingling; heightened sensitivity.
limited movement—lack of full range of motion of a part and/or the whole extremity.
paralyzed—inability to move a part and/or the whole extremity.
swelling—an abnormal localized enlargement.
edema—an excessive amount of tissue fluid which may be local or general.
weakness—lacking in strength.
hand grip weak—marked decrease in ability to grasp an object.
contractures—permanent contraction of a muscle due to spasm or paralysis.
muscle spasms—involuntary convulsive muscular contraction.
tremors—quivering; an involuntary movement of a convulsive nature.
missing—absent due to birth defect, trauma or surgery.

8. GENITALS (Female—vagina; Male—penis)

L.M.P. date—date of last menstrual period of female patient.
Discharge:
Select the term which best describes the color of the discharge.
spotting—intermittent bloody discharge.
foul odor—offensive odor.

9. RESPONSE TO FOOD/EATING

Record the weight.
Special Diet:
Specify type of diet.
nausea—inclination to vomit; queasy feeling in stomach.
anorexia—loss of appetite.
refuses to eat—rejects food offered.
distention—enlargement from internal pressure of gas or liquid.
diff. swallowing—difficult passage of food or fluids from the mouth into the GI tract.
distorted taste—misinterpretation of tastes.
Small Intake of:
fluids—insufficient to maintain fluid balance.
food—insufficient amount to maintain proper nutrition.

10. ELIMINATION

Emesis:
Vomiting of contents of the gastro-intestinal tract through the mouth.
bile—a thick, viscid fluid with a bitter taste, secreted by the liver, stored in the gall bladder and varies in color; from liver, it is straw color; from the gall bladder, it varies from yellow to brown and green; there are more solids in green bile and it is mixed with mucus.
undigested food—recognizable particles of food.
bloody—emesis contains red blood.
liquids—vomitus composed primarily of fluids.
Bowel:
bowel movement—evacuation of feces since last recording.

constipated—difficult defecation; infrequent passage of feces with passage of unduly hard and dry fecal material.
diarrhea—morbid frequency of bowel evacuation; the stools having more or less fluid consistency.
involuntary—inability to control the movement of the bowels.
impacted—accumulation of feces in the rectum pressed firmly together so as to be immovable.

Urinary:
Select the term which best describes the color of the urine.
bladder distended—enlarged from internal pressure of liquid.
not voiding—no voluntary output of urine.
dysuria—painful or difficult urination.
incontinent—inability to control urination.
frequency—urinating at short intervals.
urgency—a force or impulse that impels the person to void.

11. WOUNDS
Describe type and location of wound/incision, only if not apparent from name of surgery or diagnosis.
inflamed—tissue reaction to injury characterized by pain, heat, swelling, and redness.
hematoma—a tumor-like mass produced by coagulation of extravasated blood in a tissue.
gaping—non-union of edges of wound.
Drainage:
serous—thin and watery, like the liquid left after the clotting of blood.
sero-sanguineous—composed of serum and blood.
sanguineous—consisting of blood.
muco-purulent—containing mucus and pus.
bile—a thick, viscid fluid with a bitter taste, secreted by the liver, stored in the gall bladder and varies in color; from liver, it is straw color; from the gall bladder, it varies from yellow to brown to green; there are more solids in green bile and it is mixed with mucus.
fecal matter—content of large bowel.
urine—secretion from kidney and stored in the bladder.
odor—indicate type of odor if any is present.

12. CAST/TRACTION
See terms previously described.
pale—lack of color, pallor.
cold—lacking in normal body warmth.

13. DRAINAGE TUBES
The most commonly used drainage tubes have been included. Space is provided to write in other tubes that may be used for treatment of the patient.
As stated on the form, use the letter in the box opposite the term or terms which are appropriate to describe the color and consistency of the drainage as well as how it is functioning.

14. ACTIVITY LEVEL
Check the term that describes the maximum level of the patient's activity.
bed only—confined to the bed at all times.
dangles only—sits upright on the side of the bed with the lower extremities hanging loosely over the side, does not get out of bed.
chair only—sits up in a chair for specified periods of time, does not walk about the room.
BRP only—activity is limited to bathroom privileges.
room only—confined to room.
one level only—unable to manage stairs.
ambulates—walks, not confined to bed.

15. AIDS TO MOBILITY
Check the device which the patient uses to aid in locomotion.

16. RESPONSE TO ACTIVITY
dizziness—whirling sensation in the head with a tendency to fall.
faint—feeling of weakness.
fatigued—feeling of tiredness or weariness.
short of breath—shallow rapid respirations.

17. PAIN

Record the location, characteristics and duration of pain. Use code on form to indicate right or left. "B" indicates the pain is bilateral. If the patient has pain in more than one body area, check all areas involved.

incisional—refers to the cut in the skin made for surgical purposes.

chest—the part of the body enclosed by the ribs and sternum.

abdominal—pertaining to that part of the body lying between the chest and the pelvis, anteriorly.

lower back—the sacral area of the spine.

calf of leg—the fleshy back part of the leg below the knee.

head—the upper division of the body that contains the brain, the chief sense organs, and the mouth.

sharp—acute, cutting pains.

aching—a dull, generalized, persistent pain.

cramp-like—severe, paroxysmal type pains.

throbbing—pulsating.

constant—continuous, unchanging.

intermittent—coming and going at intervals.

not relieved by therapy—the severity or intensity of the pain is not appreciably alleviated by the ministrations of the nurse or by the medication or treatment specified for that purpose.

18. MENTAL STATUS

lethargic—functional torpor or sluggishness; stupor or abnormal drowsiness.

confused—perplexed or bewildered; answers to questions are inappropriate.

disoriented—incorrectly perceives self and environment in relation to time, place, or person.

inattentive—inability to focus mind on an idea or some aspect of the world or reality.

forgetful—temporary loss of memory.

unresponsive—no response to sensory stimulation.

19. SPEECH COMMUNICATION

reticent—inclination to be silent, restrained in expression or uncommunicative.

evasive—avoidance of answering others directly.

verbose—excessive wordiness; extreme talkativeness.

stuttering—defect in speech in which there is stumbling and spasmodic repetition of same syllable.

slurring—slides or slips over sounds that would normally occur in an utterance.

unable to speak—inability to respond verbally.

20. OBSERVED BEHAVIOR

restless—continuous movement of the body or a part of the body.

crying—weeping or lamenting.

withdrawn—social detachment and unresponsiveness.

underactive—not moving about as much as is desirable in relation to illness or condition.

combative—physically striking or attempting to strike others.

abusive—harsh verbal attacks on others.

noisy—loud talking, hollering or banging objects.

21. SOCIAL RESPONSE

wants to be alone—expressed desire to have minimal or no contact with anyone (family, friends, staff).

doesn't want to be alone—desire or need to have constant companionship.

Upset by:

The patient becomes emotionally disturbed by contact with his family, visitor(s), roommate(s), or staff.

22. FEELINGS EXPRESSED BY PATIENT

depression—a feeling of morbid sadness or melancholy.

nervousness—strong feelings of being easily excited, irritated, jumpy, uneasy or disturbed.

anger—strong feelings of displeasure and/or antagonism.

fear—unpleasant emotion caused by anticipation or awareness.

wants to die—lacking the desire to live.

undesired changes due to illness—feeling of anxiety concerning possible adverse effects from illness, surgery on body or loss of a part of body.

23. PERCEPTIONS OF ILLNESS

Record the patient's understanding of the signs and symptoms of his present illness.

misconceptions—incorrect ideas and beliefs about illness; misunderstands the meaning of signs and symptoms of illness.

inadequate information—insufficient knowledge about the disease and/or signs and symptoms of illness.

refuses to talk about illness—avoids any discussion of disease or condition.

preoccupied with illness—signs and symptoms completely absorb the patient's mind and interests.

denial—refusal to admit the truth or reality about illness or prognosis.

24. PERCEPTIONS OF PROGNOSIS

Record the patient's expectations in relation to his recovery from *this* illness.

complete recovery—full recuperation to former state of health.

no change—condition will remain the same.

to die—death within this hospitalization.

doesn't know—lack of knowledge about probable recovery level.

partial recovery—incomplete recuperation to former state of health.

25. COMMENTS

Record any additional pertinent information about the patient in this section.

Signatures:

Sign your name, e.g., Jane E. Smith, R.N.., in the space provided.

NURSING ASSESSMENT:
RECOVERY FROM ANESTHESIA

HOSPITAL _____ Patient Information _____

surgeon _____ MD operations _____

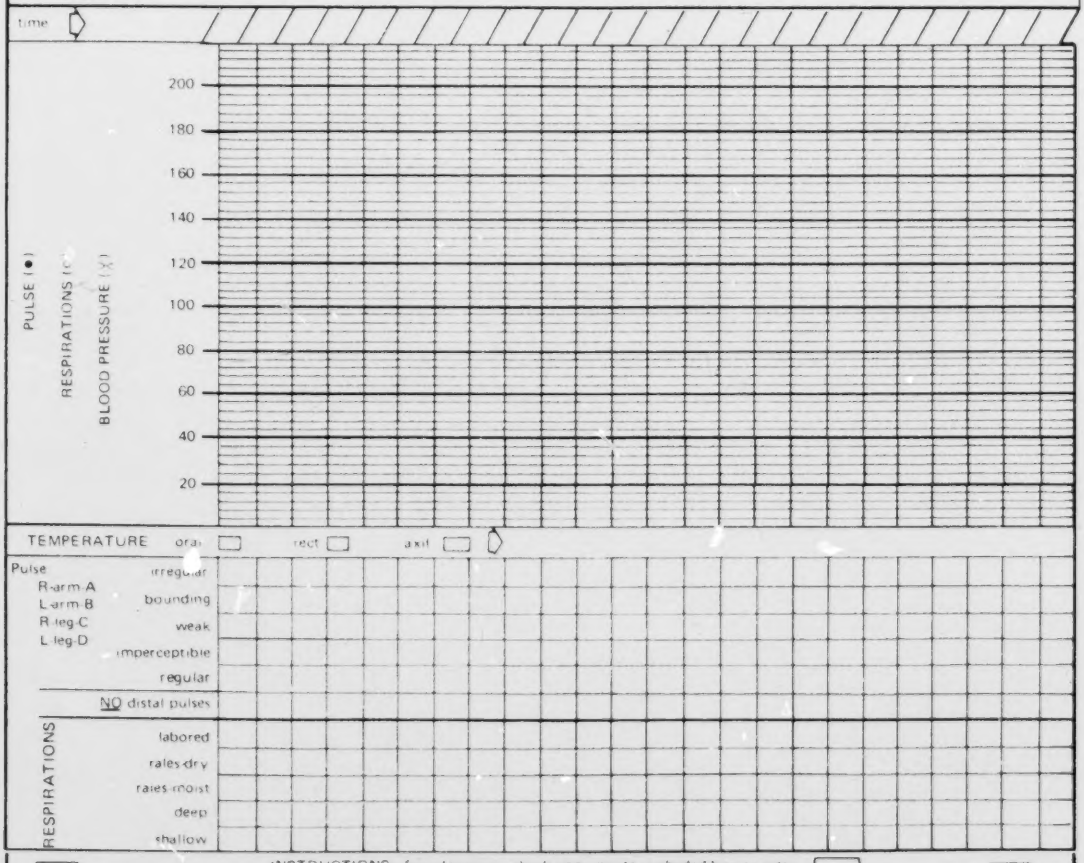
anesthesiologist _____ MD / RNA o.k. to floor _____ MD
signature

admitting nurse _____ RN time admitted _____ AM/PM

1. ANESTHESIA RECOVERY

a. Swallows _____ b. Moves Legs _____ c. Sensation _____ d. Awake _____
general time spinal time nerve block time time

2. VITAL SIGNS



NOTE INSTRUCTIONS for admission check appropriate unshaded box or areas
for discharge check only the shaded boxes or areas

3. RESPIRATORY AIDS

OXYGEN VENTILATOR

flow ☐☐ liters per min

nasal ☐☐ Bennett ☐☐

mask ☐☐ other _____ ☐☐

comments

comments

4. AIRWAY

none ☐☐ nasopharyngeal ☐☐

oral ☐☐

endotrach ☐☐ TRACH: cuffed ☐☐

nasotrach ☐☐ no cuff ☐☐

comments

comments

FORM 0003 pg 1 of 3

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NURSING ASSESSMENT:
RECOVERY FROM ANESTHESIA

HOSPITAL _____ Patient Information

5. MEDICATIONS GIVEN

drug & dosage	route	site	time	reason given	initial

6. INTAKE AND OUTPUT

A. PARENTERAL FLUIDS

time bottle started	AMOUNT & SOL	ADDITIVES	C. V. P.	time bottle is finished	amount infused in this shift
	cc				cc
	cc				cc
	cc				cc
	cc				cc
	cc				cc
	cc				cc

TOTAL BLOOD cc | PARENTERAL FLUID TOTAL cc

B. METHOD

locate

STRAIGHT NEEDLE
INTRACATH
CUTDOWN

comments:
comments:

C. CENTRAL VENOUS PRESSURE

TIME	READINGS	TIME	READINGS

D. URINE

Foley

time	amount	sp. gr	clr	dk. amb	pink	clots	cldy	red	other
	cc								
	cc								
	cc								
	cc								
	cc								
	cc								

TOTAL cc

E. EMESIS

time	amount	green	bloody	coffee ground	other*
	cc				
	cc				
	cc				

TOTAL cc

*

ICE CHIPS

F. DRAINAGE TUBES

indicate time of observed condition in respective column especially in event of change

	none	N/G	H'vec	other	other	comments time – tube (specify)
	time inserted					
circle	suction	no	no	no	no	
	patent	no	no	no	no	
	color					
	consistency					
	other					
	AMOUNT	cc	cc	cc	cc	

EXCESSIVE DIAPHORESIS ☐ TOTAL OUTPUT cc TOTAL cc

FORM 0003

NURSING ASSESSMENT:
RECOVERY FROM ANESTHESIA

HOSPITAL _____ Patient Information

NOTE INSTRUCTIONS for admission - check appropriate unshaded boxes or areas
for discharge - check only the shaded boxes or areas

7. EXTREMITIES

CIRCLE: cyanotic mottled edema tingling cold

ARMS/fingers: right, left
LEGS/toes: right, left

comments
comments

8. SKIN

flushed, pale, cyanotic
dry, moist, other ____
cool, warm, other ____

comments
comments

9. CAST, TRACTION

cast
traction
describe/locate _____

comments
comments

10. DRESSINGS none

dry
peri-pad
wet: sero-sanguinous, sanguinous
other _____
reinforced
changed
number of times ____

comments
comments

11. MENTAL STATUS

alert
lethargic
confused
unresponsive

comments
comments

12. RESPONSIVENESS

both verbal & physical stimuli
disoriented
physical stimuli only
neither verbal nor physical stimuli

comments
comments

13. BEHAVIOR

lying quietly
restless
talkative
combative
irritable
crying

comments
comments

14. POSITION IN BED

flat in bed
semi-Fowlers
side only
legs elevated

comments
comments

15. PAIN

patient complaining of pain
locate _____

comments
comments

16. CARDIAC MONITOR none

rhythm
Reg. Sinus, Nodal, PVC's
Vent. Fib, Vent. Tach, Pacemaker
No./min. _____ type _____

comments
comments

17. NEUROLOGICAL SIGNS

CIRCLE: moves, weak grip, weakness, ataxia, spasms, tremors

ARM/HAND rt lt
LEG/FOOT rt lt

PUPILS rt lt
unequal
dilated
sluggish - or fixed
do not react to light
other _____

comments
comments
comments
comments

FORM 0003 pg. 3 of 3

Manual

Nursing Assessment: Recovery from Anesthesia (0003)

The purpose of this form is to provide continuity of communication between the preoperative and postoperative period by providing a summary of information that describes the patient's recovery from anesthesia. The information encompasses that which is observed and recorded throughout the recovery phase as well as the patient's status on admission and discharge.

Instructions:

1. Start the form as soon as the patient is admitted to the recovery room.
2. Record the name of the surgeon, anesthesiologist, admitting nurse, operation(s), and the time admitted to the recovery room in the appropriate spaces.
3. Record the admission data in the unshaded boxes.
4. Record the discharge data in the shaded boxes.
5. There is space for the anesthesiologist or physician to sign his name, authorizing transfer of the patient.

Introduction:

The purpose of this form is to facilitate the recording of clinical information pertinent to the patient's recovery from anesthesia. It is used: (1) to record the nursing assessment of the patient on admission to the recovery room, (2) to record clinical information about the patient's progress during his recovery from anesthesia, and (3) to record the nursing assessment of the patient upon discharge from the recovery room. Admission data is to be recorded in the *unshaded* boxes; discharge data in the *shaded* boxes. The name of the hospital should be recorded, if not printed on this form.

Specific Instructions for Use:

1. Start a form as soon as the patient is admitted to the recovery room.
2. Stamp, write-in, or paste label from computer center in the space provided on each separate page of the form.
3. Record the name of the surgeon, anesthesiologist, admitting nurse, operation(s), and the time admitted to the recovery room in the appropriate spaces.
4. There is space for the anesthesiologist or physician to sign his name and specify the time when the patient may be transferred from the recovery room to his unit.

1. ANESTHESIA RECOVERY

Under "Anesthesia Recovery," there are terms listed related to three different types of anesthesia. Select the type of anesthesia administered and the term that applies to the patient's recovery from that anesthesia:

swallows—if patient had *general anesthesia*, record the time at which he is able to swallow oral secretions.

moves legs—if patient had *spinal anesthesia*, record the time at which he is able to move legs and toes; return of sensation.

sensation—if patient had a *nerve block*, record time at which he is able to feel pressure or painful stimuli in the area affected by the nerve block.

awake—time patient is able to be aroused.

Record time patient is awake for all patients, no matter which type of anesthesia is administered.

2. VITAL SIGNS

Record the time the vital signs are taken in the space indicated at the top of the graph.

Record the blood pressure, pulse and respiration on the vertical line beneath the appropriate time.

Systolic blood pressure is indicated by a "V"

Diastolic blood pressure is indicated by a "^"
Pulse is indicated by a "●"
Respirations is indicated by a "0"
Temperature is to be recorded in the space at the bottom of the graph. Note time, if significant.
Check the mode by which the temperature was taken.
Pulse:
regular—pulse beats occur at equal intervals.
irregular—pulse beats occur at unequal intervals.
bounding—the volume of the pulse reaches a higher level than normal, then disappears quickly.
weak—pulse lacks fullness indicating decreased blood volume.
imperceptible—pulse taken at site cannot be felt.
No Distal Pulses:
Identify location where pulse cannot be obtained by using code related to an extremity, such as no left pedal pulse— "D."
Respirations:
labored—respirations requiring obvious expenditure of energy.
rales: dry—an abnormal sound produced by passage of air through constricted or thickened bronchi.
rales: moist—an abnormal sound produced by passage of air through bronchi which contain secretions.
deep—respirations in which the rise and fall of the chest and abdomen are unusually marked.
shallow—respirations in which the rise and fall of the chest and abdomen are very slight with minimal air exchange.

3. RESPIRATORY AIDS
Check the appropriate term to identify the type of respiratory assistance the patient is receiving.
Oxygen:
flow l/min.—record the rate at which oxygen is being administered to the patient on admission and discharge. If discontinued by time of discharge, indicate by recording a zero l/min. Note time under comments.
nasal—oxygen administered via a cannula inserted through the nose.
mask—oxygen administered via a device covering the mouth and nose.
Ventilator:
Check "Bennett" if the patient is on a Bennett Respirator.
If patient is on a different respirator, write in type (Bird, Emerson, Engstrom, etc.) and check.
If discontinued prior to discharge, note time under "Comments."

4. AIRWAY
Check the instrument inserted into the patient's nose or mouth to keep his air passage clear.
none—no airway in place.
endotrach—airway inserted through the mouth extending into the trachea.
nasotrach—airway inserted through the nose extending into the trachea.
nasopharyngeal—airway inserted through the nose extending into the pharynx.
oral—airway inserted through the mouth and extending to the back of the tongue.
trach—artificial opening in the trachea usually for the insertion of a tube to facilitate breathing.
cuffed—inflatable balloon around the outer cannula of the tracheostomy tube.
not cuffed—no balloon around the tracheostomy tube.

5. MEDICATIONS GIVEN
Record drug, dose, route, site, time, reason given for P.R.N. medications or if important for others caring for patient to know. The person who administers the medication should place his initials in the appropriate column.

6. INTAKE AND OUTPUT
Section A—Parenteral Fluids
Each line should give complete data for one unit, or portion of a unit, of parenteral fluids administered during the

shift. The information to be included in this section is described below:

Time bottle started is either:

(1) *time at which infusion is started,*

(2) time at which patient is admitted to recovery room if an IV is carried over from the surgery phase, or

(3) time at which a new bottle *is added* to the IV.

Amount and solution is either:

(1) number of cc's of solution in the bottle when the infusion is started and the name of the solution, or

(2) number of cc's of solution remaining in a bottle which is being carried over from the surgery phase and the name of the solution.

Additives—any drugs added to the solution by the nurse, doctor, or pharmacist.

Check CVP if IV line is used to determine the central venous pressure.

Time bottle is finished—time at which the solution in the bottle has infused or the fluids have been discontinued.

Amount infused in this period of time is either:

(1) number of cc's of solution infused for which you are taking credit at the time patient is transferred to unit, or

(2) number of cc's of solution when contents of the bottle are infused or discontinued.

Parenteral fluid total—the sum of all fluids (except blood or blood derivitives) recorded under "amount infused in this shift" column. Add and record the sum in the space provided.

Total blood—the sum of all blood or blood derivitives recorded under "amount infused in this shift" column. Record the sum in the space provided.

Section B—Method of Administration

Check if the IV is administered either by straight needle, intracath or a cutdown. Locate the site of each in the space provided. If the site is changed, check in discharge space the site(s) of the fluids being administered at that time.

Section C—Central Venous Pressure

Record the CVP readings and the time each recording is done.

Section D—Urine

Time and amount—hour and the amount of urine in cc's each time the output is measured.

Check "Foley" if the patient has an indwelling catheter. If the Foley is either inserted or removed on your shift, record the time under comments. If it is emptied only one time, record the time and amount under "Total."

Total—add the amounts recorded and place the sum in the space provided. Foley catheter total (if only one sum) may be placed in the same space, but *time* of recording should be noted following the total cc's.

Specific Gravity—value of the specific gravity reading of the urine specimen.

The finding is to be recorded under the column on the same line to which the data pertains.

Check the appropriate terms (i.e., clear, dark amber, pink, clots, cloudy, red) to describe the characteristics of the urine when the time and amount are recorded. If an appropriate term is not listed, write one in under "other."

Section E—Emesis

Record the time and amount of each emesis (if any) that the patient has during this time period.

Check the term (i.e., green, bloody, coffee ground) appropriate to describe the characteristics of the vomitus.

green—bile colored or various shades of green.

bloody—refers to the presence of obvious bright red blood in the vomitus.

coffee grounds—refers to vomitus that looks like coffee grounds.

other—select a term that is appropriate to describe vomitus and write it in space following the asterisk

ice chips—check if ice is being given to patient

Record the total amount of emesis measured during recovery phase beside "Total."

Section F—Drainage Tubes

The two most commonly used drainage tubes are displayed across the top of this section with a third and fourth column left open for any other drainage tube(s) that may be used for the treatment of the patient.

The pertinent information should be recorded about each tube and the drainage from the tube (if any) in the appropriate row under the column heading to which the information applies.

An explanation of the descriptive terms follows:

Time Inserted—record the time a tube is inserted, if it is done during the recovery phase.

Suction—circle "no" if the tube is to gravity drainage.

Patent—circle "no" if the tube *is* obstructed.

Time Removed—if any tube is removed, note time and tube under comments.

Space has been provided for you to write in color and consistency of the drainage.

It is suggested that the nursing staff select several descriptive terms upon which the group reaches a consensus of the meaning to be communicated concerning the color and consistency of the drainage. E.G., the project staff used: red, pink, yellow, green, brown to denote color; clear, cloudy, particles and clots to denote consistency.

Amount—record the quantity of the drainage in the row under the column to which the amount pertains. If there has been no drainage a zero should be placed in the space provided.

Total—sum the amounts recorded if more than one drainage tube in place, and record this number in the space provided in the lower right hand corner of Section F.

Excessive Diaphoresis—check in the space provided if the patient is perspiring more than is expected during the recovery phase.

Total output on discharge from recovery room—record the sum total of sections D, E, and F in the space provided above "*Total Output*" at the bottom of section 6.

7. EXTREMITIES

Check the extremity (or part thereof) to which the term(s) applies.

If descriptive term applies only to fingers or toes, circle the part affected; if it applies to whole extremity, it is not necessary to circle the word.

cyanotic—blue or grey cast to the skin.

mottled—marked with blotches of different shades of color.

edema—swelling of any extremity or part.

tingling—prickling sensation.

cold—marked by lack of warm feeling in the extremity.

8. SKIN

Check the terms (defined below) which most accurately describe the color(s) and characteristics of the patient's skin.

flushed—redness of the face and neck.

pale—whitish color of the skin.

cyanotic—blue or grey cast to the skin.

dry—lack of obvious moisture on the skin.

moist—slightly or moderately wet or damp skin.

9. CAST/TRACTION

Check "cast" and/or "traction" whichever applies.

In the space following "describe/locate," indicate the part of the body in a cast. If the patient is in traction, specify the type and the number of pounds of weight.

Note color and size of drainage area under "comments," such as, spot size of a quarter. Any change in the size of the drainage area should be noted in the discharge space.

10. DRESSINGS

none—no dressing.

wet: sero-sanguineous—drainage that is both serum and blood.

sanguineous—drainage that is bright red blood.

peri-pad—sanitary napkin.

reinforced—additional dressings placed on top of the original dressing.

changed—original dressing removed and a new one applied by the physician or nurse.

number of times—the number of times the dressing was reinforced or changed in "time" span related to recovery phase.

If the dressing was both reinforced and changed, record the number of times and the span of hours for each as above.

11. MENTAL STATUS

Check the term(s) which best describe the patient's mental status.

alert—awake, accurately perceives himself and his surroundings.

lethargic—drowsy, stuporous, or apathetic.

confused—not oriented to time, place and person, or answers to questions are not appropriate.

unresponsive—unconscious and cannot be aroused.

12. RESPONSIVENESS

Check the terms (defined below) which most accurately describe the patient's state of consciousness.

both verbal and physical stimuli—responds when spoken to and when touched.

disoriented—unaware of person, place and time.

physical stimuli only—responds to touch or painful stimulation; does not respond to verbal stimuli.

neither verbal nor physical stimuli—does not respond to any kind of stimuli; unconscious.

13. BEHAVIOR

lying quietly—resting in a horizontal position; moving very little.

restless—continuously moving.

talkative—to speak almost incessantly.

combative—physically striking or attempting to strike others.

irritable—quick excitability to annoyance, impatience or anger.

crying—weeping or lamenting.

14. POSITION IN BED

If the patient's position in bed is restricted, check the item(s) that describe the specific restriction(s) imposed.

15. PAIN

Record the specific area of pain in the appropriate space.

16. CARDIAC MONITOR

none—patient not on a monitor.

EKG: rhythm—a description of the electrical activity of the heart.

regular sinus—the PR interval does not exceed .2 seconds.

AV nodal—the AV node replaces the SA node as cardiac pacemaker.

PVC's—premature ventricular contractions are due to the discharge of an ectopic focus before the expected arrival of the next impulse from the atria. The rate of occurrence is a fair index of the degree of irritability of the ventricle.

no./min.—record the number of PVC's per minute.

ventricular fibrillation—no effective contractions; the fibers simply twitch. This is characterized by rapid, repetitive series of chaotic waves that have no uniformity and are bizarre in configuration.

ventricular tachycardia—an advanced (probably, the highest) form of increased myocardial irritability. When PVC's become consecutive (at least six in a row) ventricular tachycardia exists.

pacemaker—an artificial instrument that stimulates the heart by a series of electric shocks.

type—note type of external pacemaker used; indicate if pacemaker is internal.

17. NEUROLOGICAL SIGNS

Check the part of the extremity affected that is described by one or more of the following terms:

moves—the patient is able to and does move the part voluntarily.

weak grip—a decrease in the strength of the hand grip.

weakness—lacking in strength to move the part or extremity.

ataxia—muscular incoordination, especially that manifested when voluntary muscular movements are attempted.

spasms—an involuntary, sudden, or jerky movement or convulsive muscular contraction.

tremors—quivering; an involuntary continuous movement of a convulsive nature.

pupils: unequal—difference in size (usual 4–5 mm).

dilated—the pupils are larger than 4–5 mm in size.

sluggish/fixed—the pupil(s) react slowly or do not change in size to any kind of stimuli.

do not react to light—pupil of the eye does not contract when exposed to strong light.

other—if none of the terms listed above accurately describe the pupil(s), record a term that is appropriate.

SUNYAB SCHOOL OF NURSING

8 HOUR INTAKE & OUTPUT

1. PARENTERAL FLUIDS

TIME BOTTLE HUNG	AMOUNT & SOL.	ADDITIVES	I.V.	C.V.P.	TIME BOTTLE IS FINISHED	AMOUNT INFUSED IN THIS SHIFT
	cc					cc
	cc					cc
	cc					cc
	cc					cc
	cc					cc
	cc					cc
	cc					cc
	cc					cc
	cc					cc
	cc					cc

TOTAL BLOOD cc | PARENTERAL FLUID TOTAL cc

2. CENTRAL VENOUS PRESSURE

C.V.P.
SITE

3. OBSERVATIONS

DIFFICULT REGULATION ? I.V. ☐ C.V.P. ☐

I.V. INTRACATH ☐ CUTDOWN ☐

SITE	WET	REDNESS	HEAT	SWELLING
I.V.				
C.V.P.				

IF ORAL INTAKE: TAKING FLUIDS WELL ☐ NEEDS ENCOURAGEMENT ☐ DYSPHAGIA ☐ OTHER ☐ _____

DATE _____ SHIFT: 7-3 3-11 11-7 (CIRCLE SHIFT TIME)

PATIENT IDENTIFICATION

4. ORAL

NPO ☐
ICE ☐
ORAL FLUIDS ☐
NG FEEDING ☐

TIME	AMOUNT
	cc
	cc
	cc
	cc
	cc
	cc
	cc
	cc
TOTAL	cc

cc TOTAL INTAKE

5. URINE

TIME	AMOUNT	BR. BR.	CLR.	YELL.	CLOUDY	CLAY	RED	OTHER (SPECIFY)
	cc							
	cc							
	cc							
	cc							
	cc							
	cc							
	cc							
	cc							
TOTAL	cc							

VOIDING ☐ INCONTINENT ☐

FOLEY ☐
TIME INSERTED _____
TIME REMOVED _____
PATENT ☐
IRRIGATED ☐

6. EMESIS

	cc			
	cc			
	cc			
	cc			
TOTAL	cc			(urine)

7. B.M.

TIME	AMOUNT	INCONTINENT				
TOTAL						(urine)

8. DRAINAGE TUBES*

	N/G	Cecost	Chest A	Chest P	Supra Pubic	other (SPECIFY)
TIME INSERTED						
SUCTION	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO
PATENT	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO
TIME IRRIGATED						
TIME REMOVED						
RED						
PINK						
YELLOW						
GREEN						
BROWN						
CLEAR						
CLOUDY						
PARTICLES						
CLOTS						
OTHER						
AMOUNT	cc	cc	cc	cc	cc	cc

* INDICATE TIME OF OBSERVED CONDITION IN RESPECTIVE COLUMN - ESPECIALLY IN EVENT OF CHANGE TOTAL cc

EXCESSIVE DIAPHORESIS ☐

cc TOTAL OUTPUT

FORM 0004

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Manual

Eight-Hour Intake and Output Record (0004)

The purpose of this form is to record the patient's fluid balance on a flow chart for an 8-hour period. Given a hospital information system that is functional, the data from each 8-hour period would be entered into the system and summarized for retrieval at predetermined times.

Instructions:

1. This form is a worksheet to record intake and output. The information is to be recorded as it occurs during the 8-hour period.
2. Start a new form at the beginning of each shift.
3. Stamp patient identification data in the lower left hand corner of the form.
4. Record the current day and month.
5. Circle the appropriate numbers to identify the shift hours to which the information pertains.
6. Record all information pertinent to the patient's intake on the left hand side of the form. (Detailed explanation is given under "intake" below.)
7. Record all information pertinent to the patient's output on the right hand side of the form. (Detailed explanation is given under "output" below.)

Intake:

SECTION 1—PARENTERAL FLUIDS

Each line must give complete data for one unit, or portion of a unit, of parenteral fluids administered during the shift. The information to be included in this section is described below:

Time bottle started is either—

1) time at which an infusion *is started*, or
2) time at the beginning of the shift if an IV or CVP is carried over from the previous shift, or
3) time at which a new bottle *is added* to the IV or CVP.

Amount and solution is either—

1) number of cc's of solution in the bottle when the infusion is started and the name of the solution, or
2) number of cc's of solution remaining in a bottle that is being carried over from the preceding shift and the name of the solution.

Additives are any drugs added to the solution by the nurse, doctor, or pharmacist.

Check IV to record fluids administered intravenously.

Check CVP to record fluids if the IV is connected to a manometer for recording central venous pressure measurements.

Time bottle is finished—time at which the solution in the bottle has infused or the fluids have been discontinued.

Amount infused in this shift is either—

1) number of cc's of solution infused from the bottle for which you are taking credit at the end of the shift, or
2) number of cc's of solution when contents of the bottle are infused or discontinued.

Parenteral fluid total—the sum of all fluids (except blood or blood derivitives) recorded under "amount infused in this shift" column. Add and record the sum in the space provided.

Total blood—the sum of all blood or blood derivitives recorded under "amount infused in this shift" column. Record the sum in the space provided.

SECTION 2—CENTRAL VENOUS PRESSURE

Record the CVP readings and the time each recording is done.

SECTION 3—OBSERVATIONS

These observations refer to the IV and/or CVP and should be completed at the time the totals for the 8-hour period are completed and recorded.

Difficult Regulation?—

Check IV and/or CVP if one or both is difficult to regulate at change of shift time.

IV—Check if the IV is either an intracath or a cutdown. (It is assumed that the CVP is a cutdown.)

Site—check the term(s) which best describe the site of the IV and/or CVP that is being infused at the change of shift.

SECTION 4—ORAL FLUIDS

Check "NPO" if the patient is not taking any fluids by mouth.

Check "ice" if patient is allowed to have ice chips.

Check "oral fluids" if patient is taking fluids by mouth.

Check "N/G feeding" if the patient is receiving feeding via an NG tube.

Time and Amount—record the time and amount in cc's of any fluids taken orally or via NG tube.

Total—add the amounts recorded and place the sum in the space provided.

If Oral Intake—check the appropriate boxes in the section to the left in order to communicate to the on-coming nurses if the patient is or is not having any difficulties taking oral fluids.

Total intake—The sum totals of the parenteral fluids infused and the oral fluids taken during the shift must be recorded in the space provided at the center bottom of the form. If blood administered, record this amount in the same space, labeled "blood _____ cc's."

Output:

SECTION 5—URINE

Time and amount is the hour and the amount of urine in cc's each time the output is measured. If the patient has a Foley catheter which is emptied only one time on the shift, record the time and amount under total.

Total—add the amounts recorded and place the sum in the space provided. Foley catheter total (if only one sum) may be placed in the same space, but *time* of recording must be noted as well following the total cc's.

Specific Gravity is the value of the specific gravity reading of the urine specimen. The finding is to be recorded under the column on the same line to which the data pertains.

Check the appropriate terms (i.e., clear, cloudy, clots, yellow, red) to describe the characteristics of the urine when the time and amount are recorded. If an appropriate term is not listed, write one in under "other."

Check "voiding" if the patient has voluntary control of his urine and does not have a catheter in place.

Check "incontinent" if the patient is unable to control the passage of his urine and does not have a Foley catheter.

Check "Foley" if the patient has an indwelling catheter. If the Foley is either inserted or removed on your shift, record the time in the appropriate space.

Check "patent" if the catheter is not obstructed and is draining well. The observation pertains to the situation at the time of the change of shift, when the "Totals" are being recorded.

Check "irrigated" if the catheter has been irrigated at any time during the shift.

SECTION 6—EMESIS

Record the time and amount of each emesis (if any) that the patient has during your shift.

Check the term (i.e., *not unusual, blood, coffee grounds*) that is appropriate to describe the characteristics of the vomitus.

not unusual—refers to those characteristics of vomitus that are expected under usual circumstances.

blood—refers to the presence of obvious bright red blood in the vomitus.

coffee grounds—refers to vomitus that looks like cofee grounds.

Record the total amount of emesis for your shift beside "Total."

SECTION 7—BM

Record the time and amount of each stool the patient has during your shift. Place a check in the "amount" column if the stool is formed. Record the number of cc's (if requested by physician) if the stool is liquid.

none—must be checked if the patient does not have a bowel movement during the shift.

incontinent—check if the patient is unable to control his bowels.

Record the total *number* of stools or the total cc's of stool, if liquid, in the space provided following "Total."

Check the term (i.e., not unusual, bloody, or tarry) that best describes the characteristics of each stool.

not unusual—refers to a stool that appears to be characteristic of those usually observed by the nurse.

bloody—refers to obvious bright red blood in the stool.

tarry—refers to black or blackish-brown viscous semi-liquid or liquid stools.

Check "other" if none of the descriptive terms are appropriate. Specify the appropriate term by writing it in the space provided on the form.

SECTION 8—DRAINAGE TUBES

The five most commonly used drainage tubes are named across the top of this section with a sixth column left open for any other drainage tube(s) that may be used for the treatment of the patient.

Terms pertaining to the tubes and to the description of the drainage from the tubes are listed on the left hand side of the section. There is a space titled "other" to write in any term that may be needed in addition to those listed.

The pertinent information must be recorded about each tube and the drainage from the tube (if any) in the appropriate row under the column heading to which the information applies.

An explanation of the descriptive terms follows:

time inserted—Record the time a tube is inserted, if it is done during this shift.

suction—Circle "yes" if the tube is connected to any type of suction device. Circle "no" if the tube is to gravity drainage.

patent—Circle "yes" if the tube is *not* obstructed. Circle "no" if the tube *is* obstructed.

time irrigated—Record the hour(s) of the day that the tube *is* irrigated.

time removed—Record the hour the tube is removed, if it is done during this shift.

red, pink, yellow, green, brown—Observations pertaining to color of drainage must be recorded at least once on each shift. Indicate the color(s) that best describes the drainage by recording the *time the observation of the color* is made. Any change in color of drainage will be shown by the different time(s) recorded.

Example: If at 10:00 a.m. the drainage is red, record this time on the line with "red" under the column to which the data related. If by 2:30 p.m. the drainage is now pink, record 2:30 on the line with "pink" under the same column to indicate the change in color of the drainage.

If the drainage is best described by combining two colors, such as greenish-brown, record the observation as green *and* brown.

clear, cloudy, particles, clots—Observations relating to the characteristics of the drainage other than color, must be indicated in the same manner as that explained above. (Any changes within the shift will be shown by the difference in the times recorded).

amount—Record the quantity of the drainage in the row under the column to which the amount pertains. If there has been no drainage, a zero must be placed in the space provided.

total—Sum all the amounts recorded and place this number in the space provided in the lower right hand corner of Section 8.

excessive diaphoresis—Check the above term if this observation is applicable to describe the patient state.

total output—Record the sum total of all section totals recorded in cc's and write this amount in the space provided at the bottom of the form on the extreme right hand side.

NURSING ASSESSMENT: TRANSFER SUMMARY

Agency transferring _____

Primary Diagnosis _____

Secondary Diagnosis _____

Significant Nursing Problems: _____

_____

Allergies: _____

PATIENT INFORMATION

Expected Transfer Date: ____ | ____ | ____

Transfer: ____ | ____ | ____

Physician: _____ Tel. No.: _____

Address: _____

1. FOLLOW UP CARE

Home ☐ Receiving Agency: _____

Tel. No. _____ Address (if not home) _____

CONTACT IN EMERGENCY

Name _____

Address _____

Home Tel. _____ Bus. Tel. _____

2. CARE OF PATIENT

Person willing/able to help patient:

Name _____

Address _____

Home Tel. _____ Bus. Tel. _____

Relationship _____

Patient lives: alone ☐ with others ☐

Comments: _____

3. PATIENT GOALS

Short term: _____

_____

Long term: _____

4. NURSING GOALS

Short term: _____

_____

Long term: _____

5. OUTSIDE HELP

Code: 1=ordered 2=obtained 3=needed

supplies/equip. ____ transport to: store ☐ bank ☐ clinic ☐ M.D.'s office ☐

volunteer serv. ____

medications ____

meal service ____

Comments: _____

6. EDUCATION & EMPLOYMENT

no. yrs. schooling _____ retired ☐

employed ☐ temporary lay-off ☐

never employed ☐ other: _____

type of work: _____

Comments: _____

7. MENTAL STATUS

Learns:

sluggish ☐ reluctantly ☐

lethargic ☐ with repetition ☐

forgetful ☐ by demonstration ☐

confused ☐ unable to ☐

Comments: _____

8. COMMUNICATION PROBLEMS

unable to speak ☐ speech impediment ☐

unable to write ☐ sign language ☐

English: does not understand ☐ write ☐

Language _____ : reads ☐ writes ☐

Comments: _____

9. SENSORY STATUS

VISION:	rt	lt	HEARING:	rt	lt
uncorrected	☐	☐	severe loss	☐	☐
severely impaired	☐	☐	deaf	☐	☐
blind	☐	☐	wears Aid	☐	☐

wears glasses ☐ does not have hearing aid ☐

does not have glasses ☐

Comments: _____

TASTE

loss of taste ☐

distorted ☐

(Circle) dec./inc. ☐

SMELL

loss of smell ☐

distorted ☐

dec./inc. ☐

SENSE OF FEELING

(Circle) dec./inc. sensitivity to: pressure ☐ heat ☐ cold ☐

Locate _____

FORM 0005

NURSING ASSESSMENT: TRANSFER SUMMARY

PATIENT INFORMATION

10. FAMILY LIVING ACCOMMODATION

type of dwelling

private home ☐ furnished room ☐
duplex ☐ hotel ☐
apartment ☐ trailer ☐

owns ☐ rents ☐ rooms used by family: specify no. _____

Inadequate check appropriate unshaded box ☐
Inaccessible check only the shaded box ☐

cooking facilities ☐☐ water supply ☐☐
bathing facilities ☐☐ sanitation ☐☐
toilet facilities ☐☐ other _____ ☐☐

Comments: _____

Level:
apartment ☐
ground ☐

Upper:
floor no. _____

Stairs:
none ☐
inside ☐
outside ☐
elevator ☐

bed & bath on separate floor ☐
bath shared with other tenants ☐

Inadequate Sleeping Arrangements: (specify)
patient _____
family _____
Comments: _____

11. PROBLEMS REGARDING THE HOME OR NEIGHBORHOOD

	INADEQUATE	UNSAFE
heating	☐	☐
lighting	☐	☐
ventilation	☐	☐
trash containers	☐	☐
vector control	☐	☐
other _____	☐	☐

SAFETY HAZARDS: (Specify or describe)

_____
_____
_____
_____
_____
_____

12. COMMUNITY AGENCIES PROVIDING HEALTH CARE TO PATIENT AND FAMILY

Name of Agency	Address	Tel. No./Ext.	Staff Member	Case No.	Service

	Name	Address	Tel. No.
Private Physician			
Clinic of OPD			

Church: _____ Paster: _____ Tel. No. _____

Comments: _____

13. PAYMENT FOR HEALTH CARE

Self ☐ Major Med. ☐
Medicaid ☐ Medicare ☐
INS. ☐ Current I.D. No. ☐

Comments: _____

14. COMMENTS

_____
_____
_____
_____

FORM 0005

NURSING ASSESSMENT: TRANSFER SUMMARY

PATIENT CARE STATUS		SKILLED NURSING CARE NEEDED					
		Self Care	Family Care	Physical Care	Teaching and Demonstration	Emotional Support	Guidance/ Reinforcement
15 LEVEL OF PATIENT ACTIVITIES		CODE:	F=Family	P=Patient	✓=Both above		
INDEPENDENT ☐	sits						
BED ACTIVITY:	turns						
	dangles						
DRESSES:	upper body						
	lower body						
	hose & shoes						
	manages fasteners						
EATING:	feeding						
	special equipment						
TRANSFER TO:	chair						
	stand						
	tub/shower						
	toilet						
MOBILITY:	walks						
	up/down stairs						
AIDS USED:	wheelchair						
	cane						
	crutches						
	walker						
	braces						
	quadcane						
	_____ prosthesis						
	special shoes						
other _____							
16. PERSONAL HYGIENE							
INDEPENDENT ☐	bathes						
dentures ☐	oral care						
	catheter care						
_____	ostomy care						
	bedpan						
	commode						
	collecting device						
other _____							
17. NUTRITION PROBLEMS							
INDEPENDENT ☐	prepare food						
	fluids/food intake						
	special diet						
18. MEDICATIONS AND TREATMENT							
INDEPENDENT ☐	purpose						
M=Meds	preparation						
T=Treatment	procedure						
	schedule						
	prescribed exercise						
	R.O.M. exercises						
	bladder/bowel training						
	skin/tissue integrity						
	dressing/wound care						
	use of equipment						

FORM 0005

NURSING ASSESSMENT: TRANSFER SUMMARY

NAME OF PATIENT: _____

FAMILY SURNAME: _____

19. PATIENT & FAMILY KNOWLEDGE ABOUT HEALTH PROBLEM(S)

KNOWS:	pt.	fam.		pt.	fam.
diagnosis	☐	☐	about referral	☐	☐
prognosis	☐	☐	cost involved	☐	☐

20. OBSERVED BEHAVIOR DURING CARE

	Occasionally	Frequently	Most of the time	TRANSFER STATUS
restless				
crying				
withdrawn				
underactive				
combative				
difficulty sleeping				
other _____				

21. VERBAL & NON-VERBAL BEHAVIOR

reticent				
evasive				
verbose				
abusive				
argumentative				
does not speak				
speech unclear				
other _____				

22. FEELINGS EXPRESSED BY PATIENT

depressed				
nervous				
angry				
fearful				
wish to die				
change in body image				
other _____				

23. SOCIAL RESPONSE

wants to be alone				
not left alone				
UPSET BY: family				
UPSET BY: visitor(s)				
UPSET BY: roommate(s)				
UPSET BY: staff				
other _____				

24. PATIENT CONCERNED ABOUT

25. PERCEPTIONS OF ILLNESS

CODE: ✓ =Both P & F; P=Patient; F=Family

	Occasionally	Frequently	Most of the time	TRANSFER STATUS
misconceptions				
lack of information				
refuses to discuss				
overly concerned				
denial				
other _____				

26. PERCEPTIONS OF PROGNOSIS

complete recovery				
NO change				
to die				
does not know				
partial recovery				
other _____				

27. FAMILY CONCERNED ABOUT

28. CONCERNS IDENTIFIED BY NURSE

Signature of Nurse _____ R.N.

Manual

Nursing Assessment: Transfer Summary (0005)

The purpose of this form is to facilitate the recording of significant patient data that will reflect the patient's status at the time of referral either from the hospital to another institution or community health agency, or from an extended care facility or community health agency to a hospital, etc.

Since this form is designed as a multiple purpose transfer referral form, space is provided to record information which may be pertinent to one agency's personnel who complete the form and not pertinent to another agency's personnel who complete the form.

It is not a questionnaire but is a guide and tool for recording information pertinent to any patient in a given situation.

It should be accompanied by a medical evaluation and directions, and a Social Service summary.

Instructions:

Header information—patient identification includes: name, address, age or birth date, and marital status, regardless of method of recording. Name of agency transferring the patient should be recorded.

Primary diagnosis—disease, condition or illness for which the patient is presently being treated and/or cared for as identified by the physician.

Secondary diagnosis—should include all conditions that the patient has in addition to the primary condition as identified by the physician. If the diagnoses have been recorded by the physician on an accompanying medical transfer summary, they do not have to be repeated.

Significant nursing problems—note the nursing problems that should receive immediate attention by the receiving agency's nursing personnel.

Allergies—note any food, substance, or drug to which the patient has an allergic reaction. State type of reaction if known, i.e., eye irritation, rash, wheezing, etc.

Expected transfer date—should be noted if form is sent prior to actual transfer date; a planning date.

Transfer date—actual date the patient is transferred.

Physician—state the name, address, and telephone number of the physician who is familiar with the patient's condition and will have the primary responsibility for care of the patient.

1. FOLLOWUP CARE

If the patient is being transferred to his home for care, check the box opposite home and give address and telephone number if not recorded above. Also, fill in the name of the agency that will be giving the followup care, such as, Visiting Nursing Association, Erie County Department of Health, etc. If the patient is being transferred to another care facility, write in the name, address, and telephone number of that facility. Space is provided for recording the name and telephone number of the person who is to be contacted in any emergency.

2. CARE OF PATIENT

State the name, address, and telephone number of the person who is willing and able to help with the care of the patient. Note relationship to patient, if relative or other, e.g., landlady, neighbor, etc. Check whether the patient lives alone or with others.

3. PATIENT GOALS

State the patient's objectives toward recovery from illness.

4. NURSING GOALS

State the objectives the nurse has in assisting the patient toward recovery from illness.

5. OUTSIDE HELP

The code that is given on the form is to be used in reference to arrangements made

for supplies, equipment, volunteer services, medications, and meal service.
If the patient needs transportation, check the appropriate box.

6. EDUCATION AND EMPLOYMENT
Education—State the highest grade level the person has completed.
Employment—Check the box next to the term that describes the employment status of the patient.

7. MENTAL STATUS
Definition of terms:
sluggish—slow to respond.
lethargic—indifferent or apathetic or abnormal drowsiness.
forgetful—difficulty in remembering.
confused—perplexed or bewildered; answers to questions are inappropriate.
Learns:
reluctantly—hesitates for some reason and/or shows some unwillingness to learn.
with repetition—needs to do something several times to learn.
by demonstration—needs to be shown how to do something.
unable to—person is unable to learn some particular function related to his care.

8. COMMUNICATION PROBLEMS
If the patient has any difficulty with communication, check the appropriate box. If an interpreter is needed, identify under comments and give name and telephone number of person.

9. SENSORY STATUS
Vision: Check "rt" and/or "lt" to indicate the following impairment:
uncorrected—defective vision that has not been corrected with the use of glasses or contact lenses.
severely impaired—vision is severely limited even with corrective means, such as glasses, contact lenses and/or surgery.
blind—complete absence of vision; if individual uses an aid to function, space is provided to write in the type of aid used such as, white cane, special glasses, etc.
wears glasses—uses glasses or contacts to assist vision.
does not have glasses—needs but does not own or have available glasses.
Hearing: Check "rt" and/or "lt" to indicate the following impairment:
severe loss—hears with difficulty when spoken to in the usual tone of voice.
deaf—unable to hear even when spoken to loudly.
wears aid—uses hearing aid to assist hearing.
does not have hearing aid—needs but does not own or have available a functioning hearing aid.
Taste:
loss of taste—individual is unable to distinguish sweet, sour, bitter, and salt.
dec (decreased), inc (increased)—circle the one that is applicable.
decreased—diminished acuteness of the sense of taste.
increased—excessive acuteness of the sense of taste.
distorted—misinterpretation of tastes.
Smell:
loss of smell—unable to distinguish either pleasant or unpleasant odors.
dec (decreased), inc (increased)—circle the one that is applicable.
decreased—diminished sensitivity to odors.
increased—a heightened sensitivity to odors.
distorted—odors considered agreeable are assumed to be disagreeable or unpleasant and vice versa.
Sense of feeling:
decreased sensitivity—lessened sensibility to sensory stimuli, such as pressure, heat, and cold.
increased sensitivity—highly sensitive to sensory stimuli, such as pressure, heat, and cold.

10. FAMILY LIVING ACCOMMODATION
Type of dwelling—This is a general classifi-

cation of living quarters. Also, indicate if the patient owns or rents the living quarters. If neither, identify living arrangements under "comments." For example, if the patient rents his living quarters, it may be necessary to discuss with him the arrangements he has made with the landlord to hold the apartment, house, room, etc.

Rooms used by the family—Indicate the total number of rooms that are used by the family in the dwelling. Exclude the bathroom, pantry, storage closets, hallway, foyers, stairwells and balcony, unless significant in the count.

Level—Refers to the level, in relation to the ground, where the patient lives.

Bathing and sleeping—Check if there is a problem about the accessibility of a bathroom for the patient. Identify the problem(s) concerning the adequacy of beds for patient and family.

Stairs:

none—no stairs inside or outside of home.

inside—interior of building.

outside—exterior of building.

elevator—vehicle that person can use to reach upper levels.

Inadequate or inaccessible (see code on form)—cooking, bathing and toileting facilities, sanitation and water supply may be inadequate or inaccessible. If so, check in the appropriate space(s) and explain the problems under comments.

11. PROBLEMS REGARDING THE HOME OR NEIGHBORHOOD

Heating, lighting, ventilation, vector control, or disposal of trash or garbage may be inadequate or unsafe. If so, check, and explain any problem in the space provided under "Safety Hazards."

12. COMMUNITY AGENCIES PROVIDING HEALTH CARE TO PATIENT AND FAMILY

State the name, address and telephone number of the family physician if different from that on page 1, and/or clinic providing care for the patient; also, any other agency that assists the patient such as: Department of Social Welfare, Veterans' Administration, Department of Vocational Rehabilitation and church organizations. The pastor of the patient's church can be contacted for assistance for the patient.

13. PAYMENT FOR HEALTH CARE

If the patient is paying for his health care (no insurance), check self.

self—patient or family is responsible for payment.

major medical—extra insurance coverage not usually covered under ordinary policy; extensive expense involved.

Medicaid—State program of financing of health care for selected individuals.

Medicare—Federal program of financing of health care for persons over 65 years of age.

insurance—health insurance such as, Blue Cross and Blue Shield, Prudential, Metropolitan, etc.

current I.D.—individuals covered by insurance of any kind must have a current card to insure payment. For example, patients receiving Medicaid must have a card to receive medications from a pharmacy.

14. COMMENTS

Space is provided to record any additional pertinent information not included on the form.

PATIENT CARE STATUS

In order to give a complete picture of the patient's care status at the time of transfer, space is provided to record both what the patient and the family can do without assistance, as well as those activities with which they need the nurse's assistance.

The aspects of care to be assessed are:

Section 15. Level of Patient Activities.

Section 16. Personal Hygiene

Section 17. Nutrition Problems

Section 18. Medications and Treatments

If the patient, unassisted, can do all the activities listed in a Section, place a check mark in the box next to "independent," found in the upper left hand corner of each section.

If the patient is able to do some of the activities, place a check mark opposite the

activity in the first column labeled "Self Care."

If the patient is assisted in any of these activities by members of his family (or a friend), place a check mark opposite the activity in the column labeled "Family Care."

Patient-family Needs—Code is P for patient, F for family.

Skilled nursing care needed—The four columns give the categories of assistance that the patient or family may need from the nurse. Use the code at the top of the page to indicate which aspect of care requires assistance from the nurse.

15. LEVEL OF PATIENT ACTIVITIES

If patient is completely independent in this section of activities, check the box opposite "independent."

bed activity—if the patient is restricted to bed, indicate those activities that he can manage alone or needs assistance to perform.

dresses—check the term that describes the patient's ability to put on or take off his clothes.

eating—indicate if the patient can feed himself, or note if any special equipment is used, for example, long handled utensils, or tube if tube fed, or any mechanical device.

transfer to—indicate if the patient can get in and out of a bed or chair and into or out of the bathtub.

mobility—check the method the patient uses to get around, and check appropriate aid if used.

wheelchair—if the patient can transfer to and from a wheelchair and propel, check under self care; if he is unable to do this, check whether the family or nurse must assist.

prosthesis—if the patient has an artificial limb and can put it on by himself, check self care; indicate type of prosthesis on line preceding the term.

16. PERSONAL HYGIENE

Indicate if the patient has dentures. Indicate any problems in personal hygiene.

catheter care—refers to the cleansing of the skin around the meatus.

ostomy care—the type of ostomy should be noted on the line that precedes ostomy.

collecting device—any type of equipment used to collect urine, such as a leg bag or an external catheter, etc.

17. NUTRITION PROBLEMS

If the patient needs no assistance in maintaining a well balanced diet, check "independent."

If the patient is independent in some of the aspects of nutrition, place a check mark under "self care" opposite the item. If he needs assistance from family or nurse, check item under the appropriate column(s).

18. MEDICATIONS AND TREATMENTS

If the patient is independent in taking his medications and performing any treatments that have been prescribed, check "independent."

If he can do some of these, place a check mark under "self care" opposite the item. If he needs assistance from family or nurse, indicate item under appropriate column(s) by an "M," if the assistance refers to medication, or a "T," if it refers to treatment.

R.O.M. refers to range of motion exercises. It is entirely possible that the nurse would use both the codes for medication and treatment as well as P for patient and F for family in the appropriate column(s).

19. PATIENT AND FAMILY KNOWLEDGE ABOUT HEALTH PROBLEM(S)

It is important for the personnel in the receiving agency to be aware of the knowledge that both the patient and the family have concerning the diagnosis and prognosis of the patient's condition or illness and about the present referral and actual and possible cost involved.

Any additional information may be noted under "Comments."

NOTE: Sections 20 through 26 are primarily concerned with the emotional and social responses of the patient both during the period of care (occasionally, frequently, or most of the time) and at the time of

transfer. Sections 20, 21, 22, 23 and 24 apply to the patient. Sections 25 and 26 apply to both patient and family. Use code given at top of Section 25 to record responses in these two sections.

20. OBSERVED BEHAVIOR DURING CARE

restless—continuous movement of the body or a part of the body.
crying—weeping or lamenting.
withdrawn—social detachment and unresponsiveness.
underactive—not moving about as much as is desirable in relation to illness or condition.
combative—physically striking or attempting to strike others.
difficulty sleeping—awake during the hours one usually sleeps.

21. VERBAL AND NONVERBAL BEHAVIOR

reticent—inclination to be silent, restrained in expression or uncommunicative.
evasive—avoidance of answering others directly.
verbose—excessive wordiness; extreme talkativeness.
abusive—harsh verbal attack on others.
argumentative—tendency to dispute or disagree in words.
does not speak—inability or refusal to respond verbally.
speech unclear—indistinct and difficult to understand.

22. FEELINGS EXPRESSED BY PATIENT

depressed—feels sad or melancholic.
nervous—feels irritated, jumpy, uneasy, disturbed or agitated.
anger—strong feeling of displeasure and/or antagonism.
fearful—to be afraid or apprehensive.
wish to die—lacks desire to live.
change in body image—feeling of anxiety concerning possible adverse effects from illness, surgery, or loss of a part of body.

23. SOCIAL RESPONSE

wants to be alone—expressed desire to have minimal or no contact with anyone (family, friend, health personnel).
not left alone—desires or needs to have constant companionship.
upset by—the patient becomes emotionally disturbed by contact with family, visitors, roommate, personnel of agency, or institution.

24. PATIENT CONCERNED ABOUT

Space is provided for you to state or describe any concerns that the patient may express. It may or may not be related to his illness but could have some influence on behavior of patient.

25. PERCEPTIONS OF ILLNESS

Use code given to record both the perceptions of family and patient if known. Use P for patient and F for family. Make a check mark if both patient and family express same response.

misconceptions—incorrect ideas and beliefs about illness; misunderstands the meaning of signs and symptoms of illness.
lack of information—insufficient knowledge about the disease or signs and symptoms of illness.
refuses to discuss—avoids any discussion of disease or condition.
overly concerned—worries unduly about illness or condition.
denial—refusal to admit the truth or reality about illness or prognosis.

26. PERCEPTIONS OF PROGNOSIS

Record the patient's expectation in relation to his recovery from this illness.

complete recovery—full recuperation to former state of health.
no change—condition will remain the same.
to die—death will result from this illness.
does not know—lack of knowledge about probable recovery level.
partial recovery—incomplete recuperation to former state of health.

27. FAMILY CONCERNED ABOUT

Space is provided for you to state or describe any concerns that the family may express. It may or may not be related to the patient's illness but could have an effect on the care of the patient or the

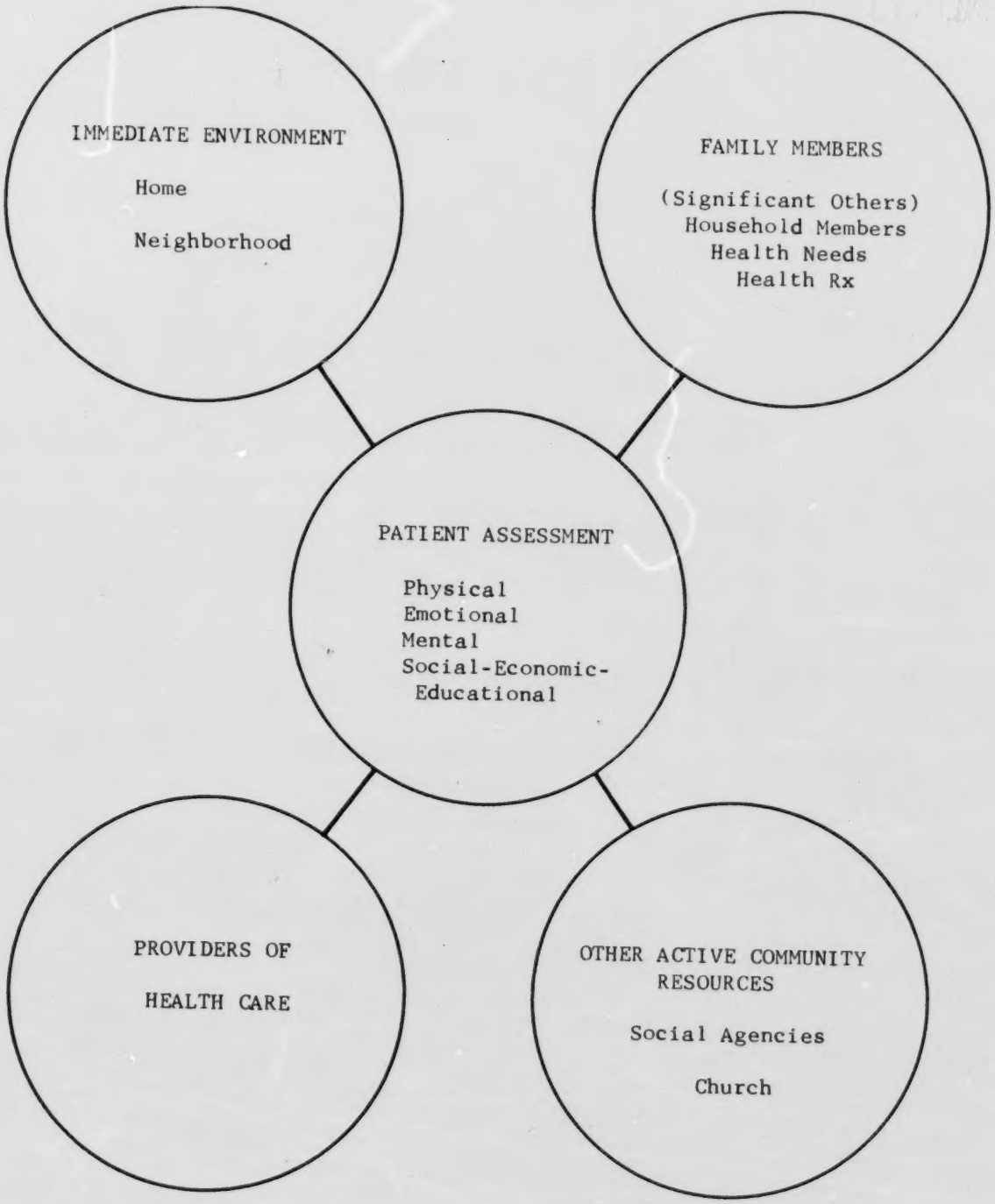
family's problems of coping with the patient.

28. CONCERNS IDENTIFIED BY NURSE
Space is provided for you to state anything that you think might have an influence on the patient's health that should be communicated to others who will be caring for the patient.

Appendix D

Community Health Concepts: Basis for Assessment

Figure D1.—Conceptual basis for assessment



Content for Initial Assessment Form—Community Health Nurse

Patient Assessment:
- Physical Aspects
  - Diagnoses (or primary health problem focus)
  - Other health problems
  - Health status
  - Activity limitations
  - Medical assessment and report—tests, X-rays, etc., allergies
- Emotional Aspects
  - Behavior
  - Verbal and nonverbal responses and reactions
  - Patient description
- Mental Aspects
  - Limitations—retardation, illness
  - History
  - Learning ability
  - Assessment—ability to cope
- Social, Economic, and Educational Aspects
  - Occupation
  - Relationships with others
  - Interests and activities
  - Cultural factors—ethnic or religious influences
  - Approximate income—source
  - Education

Physical Environment Assessment:
- Address and directions
- Housing—number of rooms, toilet, cooking facilities, number of floors, lighting, heating
- Safety factors—physical, chemical, mechanical
- Neighborhood description—nearness to stores, bus, churches, etc.; pollution?
- Auto? or usual means of transportation
- Problems patient identifies that affect him either directly or indirectly
- Problems identified by nurse—e.g., lack of recreational facilities (parks), overcrowding, crime, sanitation, safety hazards.

Family and/or Significant Others:
- Family living with patient—ages, sex, occupation, relationship to patient, health status, etc.
- Family outside of home—names, address, telephone number, contact with patient
- Others living in home—names, relationships (friend, etc.)
- Family attitudes and interests
- Willing and able to assist patient in care
- Problems identified by patient and family
- Problems identified by nurse re: family .

Provision For Medical Care:
- Institutions which have provided care
- Name, address, and telephone number of private physician or clinic(s)

Plan of care (medical) for patient, return visits, etc.
Other health team members now known to patient—P.T., nutritionists, etc. names, addresses, telephone numbers—plan of care
Patient attitudes re: care received and members providing care
Patient expectations re: care
Patient's understanding about care
Nurse's assessment re: routine of care—does patient follow prescribed Rx, taking medications, keep appointments, etc.
Problems identified re: health care by nurse, other health team members, patient and/or family

Other Community Resources Providing Services:
Names, addresses, telephone numbers of agency and worker
Types of services rendered
Problems identified by agencies or personnel re: patient
Problems identified by the patient re: services
Problems identified by the nurse

Community Health Faculty—Summer Project

Starting point—identify all patient data that would be obtained by the community health nurse on a postsurgical patient. Primarily this would be obtained through observation and interview of the patient.

Following this, determine the information that should be obtained on the initial contact with the patient and that which should be collected on a periodic basis.

Determine the types of postsurgical patients that are most often referred to the nursing agency for care. This will be helpful in structuring the format and content of the assessment forms.

Patient Information—Nursing Assessment	Initial Contact	Periodic Contacts
PATIENT ASSESSMENT		
1. Physical aspects		
a. Health status		
nutrition		
(1) diet		
(2) anorexia		
general appearance		
TPR (vital signs)		
weight		
skin		
mouth (edentulous, coated tongue, etc.)		
sensory status (deafness, blindness, glasses)		
respiratory status (cough, dyspnea, etc.)		
ability to communicate		
pain		

Patient Information—Nursing Assessment	Initial Contact	Periodic Contacts
wounds (drainage, infection, etc.)		
GI tract (diarrhea, vomiting, etc.)		
urinary tract		
rest and sleep		
exercise		
extremities		
allergic reactions		
other		
immunization levels		
b. Other health problems		
chronic illness		
secondary diagnoses		
other		
c. Activity level		
restrictions in activity		
ambulation		
bedrest		
A.D.L.		
prescribed exercises (ability to do)		
physical response to activity (dizziness, nausea, etc.)		
degree of independence		
other		
2. Emotional aspects		
a. Behavior		
restless		
crying		
withdrawn		
hostile		
combative		
underactive		
upset		
refuses to talk		
rejective		
evasive		
other		
b. Patient's perception of situation		
misconceptions		
inadequate information		
preoccupied with illness or self		
denial		
prognosis		
complete recovery		
no change		
will die		
doesn't know		
partial recovery		

Patient Information—Nursing Assessment	Initial Contact	Periodic Contacts
c. Verbal and nonverbal responses and reactions		
reticent		
evasive		
verbose		
abusive		
argumentative		
unclear		
inattentive		
lethargic confused		
confused		
disoriented		
other		
d. Patient's description		
depressed		
fearful		
nervous		
wants to die		
wants to be alone		
undesired change in body image		
e. Abnormal or unusual habits		
nail-biting		
drinking		
hand movements		
smoking		
drugs		
3. Social, cultural, economic aspects		
a. Occupation—present, past		
b. Need for retraining or reeducation		
c. Referral—to voc. rehab.		
d. Modification of work or activity role		
e. Relationships with others		
household		
neighborhood		
friends		
professionals (nurse)		
other		
f. Interests and activities (hobbies, church, etc.)		
g. Cultural factors		
life style		
mores		
customs		
health values		
religious factors and influences		
recent immigrant		
languages		
race		

Patient Information—Nursing Assessment	Initial Contact	Periodic Contacts
h. Financial status and resources		
i. education		
FAMILY AND/OR SIGNIFICANT OTHERS		
1. Family and significant others living with patient		
Age		
Sex		
Occupation		
School—children		
Relationship to patient		
Health status		
Other		
Name		
2. Family and/or significant persons outside of home		
Name		
Address		
Telephone number		
Relationships to patient		
Amount of contact with patient		
Other		
3. Family attitudes and interests		
Attitudes		
Interests		
Values		
Mores		
Lifestyle (when work, daily schedule, etc.)		
Other		
4. Problems identified:		
By patient and family		
By the nurse re: the family		
PHYSICAL ENVIRONMENT ASSESSMENT		
1. Address and directions		
2. Housing		
Number of rooms		
Toilet		
Cooking facilities		
Number of floors		
Lighting		
Heating		
3. Safety factor		
Physical		
Chemical		
Mechanical		
4. Neighborhood description		
Nearness to stores, churches, bus, etc.		
General description		

Patient Information—Nursing Assessment	Initial Contact	Periodic Contacts
5. Auto (or usual means of transportation)		
6. Problems identified by:		
The patient		
The nurse (lack of recreational facilities, overcrowding, crime, sanitation, safety hazards)		
PROVISION FOR HEALTH CARE		
1. Institutions that have provided care		
Hospitals		
Clinics		
Nursing homes		
Other		
2. Private physician(s) or clinic(s) providing care		
3. Plan of medical followup return visits, etc.		
4. Transportation needed—ambulance, etc.		
5. Health team members known to patient (active)		
Patient		
Nutritionist		
O.T.		
Other		
6. Patient's expectations re: care		
7. Patient's understanding re: care		
8. Nursing assessment re: routine of care		
Does patient follow prescribed Rx		
Taking medications		
Keeping appointments		
Have needed equipment or supplies		
Improvisations		
Other		
9. Problems identified re: health care by:		
Nurse		
Other health team members		
Patient		
Family		
OTHER COMMUNITY RESOURCES PROVIDING SERVICES		
1. Names, addresses, telephone numbers of agency and worker		
2. Types of services rendered		
3. Problems identified by the:		
Agencies or personnel re: patient		
Patient re: services		
Nurse (need for homemaker, Meals-On-Wheels, etc.)		

Appendix E

Community Health Nursing Assessment Forms and Manuals

User's Manual for Community Health Nursing Assessment Forms

Introduction:

These forms are not questionnaires and should not be used as such. The forms have been designed as guides for assessing patient and family problems and serve as tools for recording significant data essential to planning the nursing care of the patient. Each nurse using the forms should become familiar with the content prior to seeing the patient and family.

To acquaint the users with both the content and design of the forms, a manual has been prepared for each form, which includes specific instructions and definitions of the terms used.

The forms were designed primarily to serve as source documents for use by programers in developing the flowcharts and instructional programs needed for the input of patient information into a computer-assisted information system. However, the agency might wish to devise some way of using the forms as a paper system during an interim period of change-over to an electronic data processing system.

The set of forms was designed to collect physiological, psychological and social data about the adult medical-surgical patient who is cared for at home by a community health nurse. The content was organized according to constant and variable data to facilitate the construction of the forms. This also facilitates the use of the forms and enables the nurse to select only the content applicable to the patient and/or family to whom she is giving care.

The set of community health nursing assessment forms consists of the following forms:

Nursing Assessment: Basic Patient/ Information (CHN 1001)

Nursing Assessment: Patient Progress Physical Status (CHN 1002)

Nursing Assessment: Medications, Treatments, Diet Therapy (CHN 1003)

Nursing Assessment: Family Interactions (CHN 1004)

Nursing Assessment: Family Roles and Activity Patterns (CHN 1005)

Nursing Assessment: Clinic Summary (0006)

The forms are designed to alert the nurse to problem areas which may be significant for a particular patient/family. However, if the content is not applicable in a given situation, the nurse need not complete a section(s) of the form, e.g., if there are no children in the home, the two sections on Form CHN 1005 entitled "School Activities" and "Child Discipline" should be disregarded.

Specific directions and definitions of terms are included in the manual accompanying each form in the set. Information can be recorded by either checking those terms or phrases that apply or writing in terms selected by the nurse as more appropriate than those included. Some information cannot be prestructured since it is unique to the individual or family. Space has been provided so that the nurse may record this type of information. Except for Form CHN 1002 (Patient's Physical Status), all content relates both to the patient and to each member of the family or household.

The forms should be completed as soon as possible after the patient/family have been visited by the nurse. Once the initial assessment has been completed and recorded, a baseline of data has been established. Succeeding recording should identify changes in the patient/family status or include new data not previously recorded. A new set or selected forms should be used for each succeeding assessment. The frequency of reassessment depends upon the need for noting significant changes that should be reflected in the nursing care plan.

NURSING ASSESSMENT:
BASIC PATIENT/FAMILY INFORMATION

DATE OF REFERRAL: ___/___/___

REASON: _____

DIAGNOSIS: _____

DATE OF ASSESSMENT: ___/___/___

PATIENT'S NAME _____

1. TRAVEL DIRECTIONS

SPECIAL DIRECTIONS TO ADDRESS: _____

DAY AND TIME PREFERRED FOR HOME VISIT:

Day: (Circle) Sun M T W Th F Sat

Time: Anytime ☐ Noon ☐
Early a.m. ☐ Early p.m. ☐
Late a.m. ☐ Late p.m. ☐

2. PATIENT SOCIAL DATA

Date of Birth: _____ Birthplace: _____ Citizen? No ☐

Sex: Male ☐ Female ☐ Ethnic Group _____ If foreign birth, how long in U.S.A.? ____

Marital Status: (Circle) S M SEP D W Previous Marriages ☐ No. of Times ____

Maiden name: _____

Prev. Married name(s): _____

English: Speaks ☐ Reads ☐ Understands ☐

Education - Number of years in school: (circle)
3 6 7 8 9 10 11 12 14 16 18 20

Language spoken at home: (If not English) _____ Special Training: _____

Comments: _____

Employment: Student ☐ Unemployed ☐ Retired ☐ Temporary Lay-off ☐

Employed by: _____

Type of work: _____

Shift: Day ☐ Evening ☐ Night ☐ Other _____

comments _____

Religion: Prot. ☐ Cath. ☐ Jewish ☐ None ☐ other _____

Pastor/Church: _____ Tel. No. _____

3. CARE OF PATIENT

PERSON WILLING/ABLE TO HELP PATIENT:

Name: _____

Address: _____

Home telephone: _____ Business telephone: _____

Relationship: _____

Patient lives: alone ☐ with others ☐

Comments: _____

4. CONTACT IN EMERGENCY

NOT SAME AS (3)

Name: _____

Address: _____

Home Telephone: _____

Business Telephone: _____

Relationship to patient: _____

Knows diagnosis ☐

Comments: _____

5. SUMMARY OF MEDICAL ASSESSMENT

Reason for Referral: _____

Surgery performed: _____ Date(s): ___/___/___ ___/___/___ ___/___/___

Reason for surgery: _____ Prognosis: _____

Concurrent health conditions: _____ MEDICAL therapeutic goal(s): _____

M.D. Name: _____ Tel. No. _____

CHN FORM 1001 page 1 of 5

NURSING ASSESSMENT:

BASIC PATIENT/FAMILY INFORMATION

PATIENT NAME: _____

6. GENERAL BODY DESCRIPTION

DOMINANT HAND: Right ☐ Left ☐

WT. (LBS. - OZ.) ☐☐☐ ☐☐

HT. (INS.) ☐☐☐

HEAD (INS.) ☐☐☐ (CHILD)

AMPUTATION	rt	lt
leg	☐	☐
arm	☐	☐
fingers	☐	☐
toes	☐	☐
other _____	☐	☐

PROSTHESES:	rt	lt
leg	☐	☐
arm	☐	☐
breast	☐	☐
eye	☐	☐
other _____	☐	☐

Comments _____

SENSORY STATUS

VISION:

	rt	lt
uncorrected	☐	☐
severely impaired	☐	☐
blind	☐	☐

wears glasses ☐
does not have glasses ☐
Comments _____

HEARING:

	rt	lt
severe loss	☐	☐
deaf	☐	☐
wears Aid	☐	☐

does not have hearing aid ☐

TASTE:
loss of taste ☐
distorted ☐
(Circle): dec./inc.
comments: _____

SMELL
loss of smell ☐
distorted ☐
dec./inc. ☐

SPEECH:
slurring ☐
stuttering ☐
dysphasia ☐
other _____
Comments _____

COMMUNICATION:
unable to speak ☐
unable to write ☐
sign language ☐
reads lips ☐

SENSE OF FEELING:
(Circle): dec./inc. sensitivity to:
Pressure ☐
Heat ☐
Cold ☐
Locate _____
comments: _____

7. PATIENT HEALTH HISTORY

ALLERGIES
NONE KNOWN ☐

DRUGS	FOOD	OTHER
_____	_____	_____
_____	_____	_____
_____	_____	_____

comments: _____

IMMUNIZATION STATUS: NONE ☐ Not Known ☐ Unable to obtain ☐

Had Immunization for: _____ Date: _____
_____ Date: _____
_____ Date: _____

comments: _____

8. PATIENT GOALS

_____
_____
_____
_____
_____
_____
_____
_____

9. NURSING GOALS

_____
_____
_____
_____
_____
_____
_____
_____

NURSING ASSESSMENT:

BASIC PATIENT/FAMILY INFORMATION

FAMILY SURNAME _____

10. NEIGHBORHOOD DESCRIPTION

SETTING:

Urban ☐ Suburban ☐

Residential ☐ Village ☐
Business ☐ Township ☐
Inner city ☐ Farm ☐
Industrial ☐ other _____ ☐

comments: _____

TYPE OF HOUSING:

one family ☐ private project/complex ☐
two or more families ☐ municipal project/complex ☐
trailer park ☐ other _____ ☐

comments _____

11. PROBLEMS REGARDING THE NEIGHBORHOOD

Inadequate - check appropriate unshaded box ☐
Inaccessible - check only the shaded boxes ☐

Public Transportation ☐☐ Shopping Areas ☐☐
Fire/Police Protection ☐☐ Parks/Playgrounds ☐☐
other _____ ☐☐

comments

comments:

General Problems:

neglected ☐
lacks privacy ☐
littered ☐
noisy ☐
unsafe ☐
polluted _____ ☐
other _____ ☐

comments: _____

12. FAMILY LIVING ACCOMMODATION

Type of dwelling

Private home ☐ Furnished room ☐
Duplex ☐ Hotel ☐
Apartment ☐ Trailer ☐

Owns ☐ Rents ☐ Rooms used by family:

specify no. _____

*PROBLEMS (code as in section 11)

cooking facilities ☐☐ water supply ☐☐
bathing facilities ☐☐ sanitation ☐☐
toilet facilities ☐☐ other: _____ ☐☐

comments:

comments

Level:

Basement ☐
Ground ☐

Upper:

floor no. _____

Stairs:

None ☐
Inside ☐
Outside ☐
Elevator ☐

Bed & Bath on separate floor ☐
Bath shared with other tenants ☐

Inadequate Sleeping Arrangements: (specify)

patient: _____
family: _____

comments: _____

13. ASSESSMENT OF FAMILY LIVING ACCOMMODATION

INADEQUATE:

	pt/fam.	nurse		pt/fam.	nurse
heat	☐	☐	ventilation	☐	☐
light	☐	☐	trash containers	☐	☐
space	☐	☐	vector control	☐	☐

comments:

comments:

SAFETY HAZARDS: (Specify or describe)

Physical _____
Chemical _____
Mechanical _____
Environmental _____
other _____

NURSING ASSESSMENT: BASIC PATIENT/FAMILY INFORMATION

FAMILY SURNAME _____

14. SIGNIFICANT ADMISSIONS TO HEALTH CARE FACILITIES-PATIENT/FAMILY

Name: Patient/Family	Name of Facility Address	Date(s)	Reason(s)

15. COMMUNITY AGENCIES PROVIDING HEALTH CARE TO PATIENT AND FAMILY

Name of Agency	Address	Tel. No./Ext.	Staff Member	Case No.	Service

	name	address	Tel. No.
Private Physician:			
Clinic or OPD:			

comments: _____

16. PATIENT/FAMILY TRANSPORTATION

Transportation to:
- Health Care Facility ☐
- Stores ☐
- Bank ☐
- other: _____ ☐

Type Needed:
- Ambulance ☐
- Taxi ☐
- Auto ☐
- other: _____ ☐

comments _____

17. ECONOMIC RESOURCES

Sources of Income Available:

Unable to Obtain ☐

- Self ☐
- Salary/Wages ☐
- Disability Ins. ☐
- Social Security ☐
- Social Services ☐
- other _____ ☐

comments _____

18. SIGNIFICANT OTHERS (OUTSIDE OF HOME)

ENTER THE FULL NAME IN THESE SPACES. →				
address				
telephone no.(s) for emergencies				
relationship to patient				
willing/able to help care for patient				
frequency of contact with patient				

BEST COPY AVAILABLE

NURSING ASSESSMENT: BASIC FAMILY SOCIAL AND HEALTH DATA

DATE OF ASSESSMENT ☐☐☐ FAMILY SURNAME: _____

1. FAMILY AND/OR OTHERS LIVING IN HOME

If more than four use additional page(s)

HEAD OF HOUSEHOLD: _____

(List all living in home. Do not include patient.) First names of members		Specify if different surname	
Relationship to patient			
Sex			
Date of Birth			
(If not U.S.A.) Citizen of:			
Ethnic background			
Other language spoken			
Religion			
Marital status			
Maiden name			
Previous married name(s)			
Number of years in school			
Employed by/or school			
Type of work			
Special training			
Retired			
Unemployed			
Last date employed			
Usual shift worked			

2. HEALTH HISTORY FAMILY AND/OR OTHERS LIVING IN HOME

(Specify, and include dates if possible)

A. DIAGNOSED CONDITIONS	Acute illness/condition			
	Chronic illness/condition			
	Surgery/Trauma			
	Infectious/comm. disease			
	Emotional illness/condition			
	Mental illness/condition			
	Addiction			
	Mental retardation			
	Birth defects/injuries			
	Allergic to:			
	Other			
B. HEALTH PROBLEMS	Insomnia			
	Fatigue			
	Nutritional problems			
	Speech difficulties			
	Comm. disease contact			
	Motor difficulties			
	Emotionally upset			
	Impaired hearing			
	Impaired sight			
	Lacks knowledge about family planning			
	Other			
	Needs immunization(s) for:			

CHN FORM 1001

signature _____ R.N.

page 5 of 5

Manual

Nursing Assessment: Basic Patient/Family Information (CHN 1001)

Directions for Use:

In the upper left hand corner enter the date the patient was referred to the agency, the reason for the referral (e.g., newly diagnosed diabetes; needs teaching), the patient's diagnosis, and the date of the home visit when the assessment was done.

In the upper right hand corner, record the patient's name, address, telephone number, and any other identifying information as required by the agency. Use an addressograph plate or computer-printed, paste-on label, if available.

1. TRAVEL DIRECTIONS

Special directions to address—include any special directions to the address where the visit is to be made, e.g., "apartment, second floor, last door on left." If the patient is staying at a home other than his own, write in the address, telephone number, and the name of the head of the household.

Day and time preferred for home visit—Indicate the day and the time best suited for the nurse's visit.

2. PATIENT SOCIAL DATA

Record all information requested, if at all possible. If patient is a married female and has previously been married, record the name(s) which she has been listed under. "Temporary lay-off" should be checked if place of employment is on strike or shut down for a short time, rather than indicating that the patient is unemployed due to this illness. This covers those situations where the patient is able to work but cannot due to other circumstances, however he does have a job to return to.

3. CARE OF PATIENT

Record all information requested in this section.

4. CONTACT IN EMERGENCY

This contact should be a person living outside the home and not be the same as person listed in Section 3, if at all possible. It should be a responsible adult who can help in any emergency.

5. SUMMARY OF MEDICAL ASSESSMENT

Reason for referral—state the followup care prescribed by the physician.

Surgery performed; reason for surgery—state the name of the surgical procedure, date(s) and reason(s) for the surgery.

Concurrent health conditions—state any other diagnosed conditions or illnesses.

Prognosis—state the outcome as anticipated by the physician.

Medical therapeutic goal(s)—state the objectives that the physician has for the patient.

6. GENERAL BODY DESCRIPTION

Dominant hand—Check whether the patient is right or left handed, or both, if ambidextrous.

Wt. (lbs. oz.)—record weight in pounds.

Ht. (ins.)—record height in feet and inches.

Head (ins.)—If patient is an infant or has a neurological problem that would require the nurse to measure the circumference of the baby's head, record the number in inches in the spaces provided.

Amputation—loss of a limb or part thereof—congenitally, accidentally or surgically.

Prostheses—an artificial part for the body that replaces the original.

SENSORY STATUS

Vision:

Check "rt" and/or "lt" to indicate the following impairment:

uncorrected—person having impaired or defective vision who either has not had an eye exam or does not

have glasses that provide the proper correction.

severely impaired—vision is severely limited even with corrective means, such as glasses, contact lenses and/or surgery.

blind—complete absence of vision.

If individual wears glasses or contacts to function, check in the space provided. Write in other types of aids used, such as white cane, seeing-eye dog, etc. Check if patient needs glasses, but does not have a pair which corrects his vision adequately.

Hearing:

Check "rt" and/or "lt" to indicate which ear(s) has impaired hearing or complete absence of hearing.

severe loss—the patient hears with difficulty when spoken to in the usual tone of voice.

deaf—the patient is unable to hear the speaker even when spoken to loudly.

wears aid—the patient usually wears a hearing aid. Check in space provided if the patient does not have his aid with him.

Speech:

slurring—slovenly articulation of letters difficult to pronounce.

stuttering—defect in speech in which there is stumbling and spasmodic repetition of the same syllable.

dysphasia—impairment of speech resulting from a brain lesion.

Communication:

unable to speak—speech loss due to condition or illness.

unable to write—physical inability to write.

sign language—uses hand signals to communicate.

reads lips—able to identify words by observing lip movements of the speaker.

Taste:

loss of taste—individual is unable to distinguish sweet, sour, bitter, salt.

distorted—misinterpretation of tastes.

increased—excessive acuteness of the sense of taste. Circle if appropriate.

decreased—diminished ability to distinguish correct taste of foods or substances. Circle if appropriate.

Smell:

loss of smell—unable to distinguish either pleasant or unpleasant odors.

distorted—odors considered agreeable are assumed to be disagreeable or unpleasant and vice versa.

increased—a heightened sensitivity to odors. Circle if appropriate.

decreased—a dulled sensitivity to odors. Circle if appropriate.

Sense of feeling:

increased sensitivity to—a heightened sensitivity to sensory stimuli, such as pressure, heat and cold. Circle if appropriate.

decreased sensitivity to—lessened sensibility to sensory stimuli, such as pressure, heat and cold. Circle if appropriate.

locate—if more than one term applies, indicate to which part of the body each term refers.

7. PATIENT HEALTH HISTORY

Allergies—an altered reaction of body tissues to a specific substance (allergen) which in nonsensitive persons will, in similar amounts, produce no effect.

Record the name of the drug, food or specific substance if patient or family knows. If these are not known, note the type and severity of any reaction, such as, skin rash, hives, rhinitis, upset stomach, etc.

8. PATIENT GOALS

State the goals expressed and identified by the patient. If possible, list in the order of priority that the patient feels is most important to him. These may or may not all pertain to this illness but may be related to his overall health objectives and activities affected by his health.

9. NURSING GOALS

State the goals in the order of priority that you hope to help the patient achieve, both

pertaining to this illness and his overall health or activities.

10. NEIGHBORHOOD DESCRIPTION

Neighborhood is defined as the area surrounding the family home, approximately a city block in any direction.

Setting—the classification of the neighborhood environment as to urban, suburban, or rural.

Type of neighborhood housing:

one family—designed to accommodate one family per building.

two or more families—duplex or apartment house designed to accommodate two or more families per building.

trailer park—a parking facility (tract of land) that provides electrical outlets, water and sanitation, and other services that are rented by the owner of the trailer for a monthly fee.

private project/complex—a group of houses or apartment buildings owned and operated by non-governmental agencies or individuals.

municipal project/complex—a group of houses or apartment buildings owned and operated by a govewrnmental unit.

11. PROBLEMS REGARDING THE NEIGHBORHOOD

Space is allocated to indicate if the following are either inadequate or inaccessible to the family: public transportation; fire/police protection, shopping areas, parks/playgrounds, and any other areas that are significant but not included in the listing.

General problems:

neglected—buildings are run-down or in need of repairs, empty buildings, abandoned cars, buildings not painted, etc.

lacks privacy—unable to be alone or without surveillance because of proximity of others or because of characteristics of buildings, such as lack of soundproofing in apartment buildings.

littered—untidy accumulations of objects or rubbish.

noisy—presence of loud or senseless noise that may be continuous or intermittent.

unsafe—presence of threats to safety and well-being of residents.

polluted—unclean or foul air, water, etc. Specify the type of pollution, if significantly affecting health of patient/family.

12. FAMILY LIVING ACCOMMODATION

Type of dwelling—this is a general classification of living quarters. Also indicate if family owns or rents the living quarters.

Rooms used by family—Indicate the total number of rooms that are used by the family in the dwelling. Exclude in the count the bathroom, pantry, storage closets, hallways, foyers, stairwells and balcony, unless significant. Also indicate the total number of floors in the household.

Problems: cooking facilities, bathing facilities, toilet facilities, water supply, sanitation—

Indicate with a check if any of the above facilities are either inadequate or inaccessible to the patient and/or family. Include in "comments," the reason or explanation of why you checked any of the items.

Level—Refers to the level, in relation to the ground, where the family lives.

Basement—below ground reached by walking down from street level.

Ground—first level on top of the ground; no outside stairway except for porch or stoop steps.

Upper: floor no.—number of the floor above the ground level occupied by the family.

Stairs:

none—no stairs inside or outside of home.

inside—interior of building.

outside—exterior of building.

elevator—mechanical device used by family to get to living quarters.

Bed and bath on separate floor—Check if a bathroom is not located on same floor as bedrooms.

Bath shared with other tenants—Family does not have a private bathroom.

Inadequate sleeping arrangements—Specify any problems identified in sleeping arrangements for either the patient or the family.

13. ASSESSMENT OF FAMILY LIVING ACCOMMODATION

This section is concerned with the *nurse's* and *patient/family's* appraisal of the general conditions existing in the patient's home. Only those aspects that might present a threat to the health and well-being of the family should be recorded.

Inadequate:

heat—inability of the heating system (stove, furnace, etc.) to provide a temperature level that is comfortable or healthful to the household members.

light—insufficient illumination of parts or all of the home and entrances or stairways.

space—too many people or things in relation to the space available.

ventilation—lack of circulation of air, or lack of fresh air, or improper venting of combustible materials.

trash containers—absence or inadequate supply of containers.

vector control—no means of combating or preventing presence of rodents, insects, etc., or present measures ineffective.

Safety hazards:

physical—any aspect of the dwelling, such as loose stairs, falling debris, loose flooring, etc.

chemical—any man-made solutions or solids that are potentially dangerous if improperly used or ingested, such as poisons, lead-based paint, drugs, etc.

mechanical—any defects in electrical wiring, unsafe heating system, or machinery or tools present in the home or environment that present a potential threat if used, or misused.

environmental—anything in the general area of the family that is a hazard to their well-being.

14. SIGNIFICANT ADMISSIONS TO HEALTH CARE FACILITIES—PATIENT/FAMILY

Indicate any hospitalizations, care in nursing homes, rehabilitation facilities, etc. of the patient and family. Also, include the address of the facility, the dates, and the reasons.

15. COMMUNITY AGENCIES PROVIDING HEALTH CARE TO PATIENT AND FAMILY

Any agency, institution, or individual actively providing any type of service to the patient and family. This might include: Department of Social Welfare, Veterans Administration, Department of Vocational Rehabilitation, Food Services, church organizations, etc.

16. PATIENT/FAMILY TRANSPORTATION

If a problem exists regarding transportation for the patient and/or family, identify it by checking the appropriate box(es). Make no entry if no problem exists.

17. ECONOMIC RESOURCES

Sources of income available—Check the appropriate category to indicate the source of income.

Unable to obtain—Check if you cannot determine the sources of the family's economic resources. In some situations, the nurse may need to know the amount of income in order to help the family seek additional funds or assistance.

Net monthly income available—The total amount of money the family has to spend each month. For clarification or elaboration, use the space next to "comments."

18. SIGNIFICANT OTHERS (OUTSIDE OF HOME)

This section refers to those people having meaningful relationships with the patient, but who do not live with the patient. This

could include neighbors, close or distant family members, friends, clergy, etc. (Do not repeat persons listed on pg. 1.) Enter the full name of the person(s) in the spaces provided at the top of the column(s). For each person listed, write in the requested information as listed in the left hand column. Note telephone number of person to be called in an emergency.

relationship to patient—e.g., mother-in-law, friend, neighbor.

willing/able to help care for patient—check the individuals who agree and are able to assist the patient if needed.

frequency of contact with patient—record how often the person visits, phones, or writes letters; how often the patient sees or hears from this person.

NURSING ASSESSMENT: BASIC FAMILY SOCIAL AND HEALTH DATA

This page (5 of 5) should be used if the patient lives with members of the family and/or others. It does not need to be completed for the patient who lives alone. There may be exceptions to this. The nurse may wish to gather these data, if it is believed that the information would be helpful in planning the care of the patient or in determining some of the factors that may be significant to the nurse or the physician in identifying causal relationships, especially in Section 2—Health History Family and/or Others Living in Home.

1. FAMILY AND/OR OTHERS LIVING IN HOME

Family surname—the last name of the family members.

Head of household—the person who assumes the major responsibility for the family.

In the spaces at the top of the columns, write in the first name of every member of the household. Do not include the patient. If there are more than four, use another sheet. If any members have a different last name from the family name, please include complete name.

For each member of the household, write in the requested information as listed in the left hand column. Be concise. Make no entry if an item does not apply to the individual.

2. HEALTH HISTORY FAMILY AND/OR OTHERS LIVING IN HOME

A. Diagnosed conditions

Only those diseases, conditions, etc. that have been diagnosed by a qualified physician should be included in this section. The terms listed are fairly broad classifications of the various diseases, defects, afflictions, conditions, etc. If any member of the household is found to have either a history of any of the listed conditions or is presently diagnosed as such, indicate in the column under his name and next to the general category, the *specific* diagnosis and, if possible, the date(s) of diagnosis and duration. Use the category "other" for any conditions not listed.

B. Health problems

various health problems are listed in the left hand column. These do not have to be validated by a diagnosis from a physician. These may be conditions you have observed or been told about. As with the diagnosed conditions, write in the specific health problem, with dates, if significant, in the spaces provided.

Identify husband, wife, or a married son or daughter who should have counseling about family planning.

Needs immunization(s) for:—list the type needed, such as, diptheria, polio, etc.

BEST COPY AVAILABLE

AGENCY _____

NURSING ASSESSMENT: PATIENT PROGRESS
PHYSICAL STATUS

DATE OF ASSESSMENT: ___/___/___

PATIENT INFORMATION

1. MEASUREMENTS

BLOOD PRESSURE	Systolic / Diastolic	
WEIGHT		

TEMPERATURE O R A (circle)	
PULSE/min. radial	
PULSE/min. apical	
RESPIRATIONS/min.	

	Occasionally	Frequently	Most of the time	Mild	Moderate	Severe
2. VITAL SIGNS - DESCRIPTIONS						
PULSE: irregular						
bounding						
thready						
other						
RESPIRATIONS non-rhythmic						
short of breath						
labored						
dyspnea: at rest						
dyspnea: after activity						
orthopnea						
wheezing						
other						
3. RESPIRATORY AIDS none ☐						
OXYGEN: L/min.						
TRACH:						
VENTILATOR:						
other						
4. RESPONSE TO EATING						
nausea						
anorexia						
refuses to eat						
diff. chewing						
diff. swallowing						
distorted taste						
heartburn						
distention						
undue thirst						
hunger						
SMALL INTAKE OF: fluids						
SMALL INTAKE OF: food						
other						

CHN FORM 1002

	Occasionally	Frequently	Most of the time	Mild	Moderate	Severe
5. EENT						
VISION: R=right L=left B=both blurring						
diplopia						
PUPILS: dilated						
unequal						
pinpoint						
LIDS: burning						
itching						
reddened						
swollen						
secretions						
EARS: tinnitus						
cerumen						
NOSE/THROAT nasal discharge						
nosebleed						
throat irritation						
MOUTH: dental problem						
not clean						
coated tongue						
lesions						
bleeding						
foul odor						
other						
6. COUGH*						
acute						
chronic						
hacking						
paroxysmal						
non-productive						
SPUTUM: green						
yellow						
blood-tinged						
gray						
viscous						
other						

page 1 of 4

NURSING ASSESSMENT: PATIENT PROGRESS

PATIENT'S NAME _____

Occasionally / Frequently / Most of the time | Mild / Moderate / Severe

7. ELIMINATION

EMESIS: bile; undigested food; bloody; liquids

BOWEL PROBLEMS: flatulence; constipated; diarrhea; involuntary; impacted

color: clay; tarry; fresh blood

URINARY PROBLEMS: frequency; urgency; burning; dribbling; incontinent

color: cloudy; dark orange; pink; red

consistency: frothy; sediment; albuminuria; glycosuria

other

8. GENITALS

L.M.P. DATE _____

DISCHARGE: white; yellow; spotting; foul odor

other

9. DRAINAGE TUBES*

A. FOLEY	B. COLOSTOMY	Use letters/tubes opposite related term(s).
C.	D.	

not patent; suction; gravity; irrigated

color { _____ _____

consistency { _____ _____

10. OBSERVED BEHAVIOR

lethargic; confused; disoriented; inattentive; forgetful; drowsiness; insomnia

other

11. PERCEPTIONS OF ILLNESS

misconceptions; inadequate information; refuses to talk about illness; preoccupied with illness; denial

other

12. PERCEPTIONS OF PROGNOSIS

complete recovery; no change; to die; doesn't know; partial recovery

other

CHN FORM 1002

NURSING ASSESSMENT: PATIENT PROGRESS

PATIENT'S NAME

ENTER CODE NOS. FROM * BODY LOCATION COLUMN

13. WOUND	Occasionally	Frequently	Most of the time	Mild	Moderate	Severe
inflamed						
hematoma						
DRAINAGE: serous						
DRAINAGE: sero-sanguineous						
DRAINAGE: sanguineous						
DRAINAGE: muco-purulent						
DRAINAGE: bile						
DRAINAGE: fecal matter						
DRAINAGE: urine						
_____ odor						
other _____						
necrotic						
sloughing						
Size/cm _____						
Depth/cm _____						

14. PAIN	Occasionally	Frequently	Most of the time	Mild	Moderate	Severe
aching						
cramp-like						
throbbing						
stabbing						
tenderness						
burning						
other _____						

15. EXTREMITIES	Occasionally	Frequently	Most of the time	Mild	Moderate	Severe
NO distal pulses						
paresthesia						
limited movement						
paralyzed						
swelling						
edema						
weakness						
hand grip weak						
contractures						
muscles spasms						
tremors						

16. SKIN	Occasionally	Frequently	Most of the time	Mild	Moderate	Severe
flushed						
pale						
cyanotic						
jaundiced						
hot						
cold						
scabs/lesions						
weeping						
dry/itching						
rash						
bruise						
reddened						
lumps						
other _____						

*BODY LOCATION

01	**HEAD AND NECK**	**08**	**ARMS AND SHOULDERS**	**16**	**CHEST**	**22**	**TRUNK**
02	Back of Head	09	Shoulder	17	Breast	23	Abdomen
03	Forehead/scalp	10	Arm	18	Sternum	24	Pelvic Area
04	Face	11	Axilla	19	Cervical Neck	25	Hips
05	Nose	12	Elbow	20	Scapula	26	Lumbar Spine
06	Chin	13	Wrist	21	Thoracic Spine	27	Lower Trunk
07	Neck-Ant.	14	Hand			28	Sacrum
		15	Fingers - 1,2,3,4,5			29	Buttocks
						30	Anus/perineal
						31	Groin

32	**LEGS**		
33	Thigh		
34	Knee		
35	Popliteal Space		
36	Calf		
37	Ankle		
38	Foot		
39	Heel		
40	Toes - 1,2,3,4,5		

R=right L=left A=Anterior P=Posterior
U=upper/proximal D=distal/lower

CHN FORM 1002

page 3 of 4

NURSING ASSESSMENT: PATIENT PROGRESS

	Self Care	Family Care	PATIENT / FAMILY NEEDS: Assistance with care	Teaching and Demonstration	Emotional Support	Guidance Reinforcement
17. ACTIVITY LEVEL			Code: P= Patient		F= Family	
bed only						
dangles only						
chair only						
BRP						
ambulates						
room only						
one level only						
up/down stairs						
other						
18. AIDS TO MOBILITY						
N.A. ☐ crutches						
cane						
walker						
brace						
wheelchair						
person(s)						
_____ prosthesis						
other						
19. HYGIENE ACTIVITIES						
Independent ☐ oral care						
care of teeth						
hair						
cosmetics						
shaving						
nail care						
bathing						
eating						
dressing						
toileting						
other						

20. RESPONSE TO ACTIVITY*

	Occasionally	Frequently	Most of the time	Mild	Moderate	Severe
perspiration						
dizziness						
faint						
fatigued						
short of breath						
unsteady gait						

CHN FORM 1002

Signature of Nurse _____ R.N.

Manual

Nursing Assessment: Patient Progress Physical Status (CHN 1002)

Specific Directions

Date of assessment should be filled in at the top of page 1 of the form.

Patient identification information should include name, address, birthdate, sex, marital status, and ethnic background.

1. MEASUREMENTS

Record the vital signs and patient's weight. If scales are unavailable and weight is estimated by patient or family, note the fact.

2. VITAL SIGNS—DESCRIPTIONS

Most of the following sections in this form provide an opportunity to record the frequency and severity (or amount) of the specific symptom noted. For example, if the patient states that most of the time he has severe dyspnea after activity, place a check mark in the column labeled "most of the time" and also in the column labeled "severe" opposite the term "dyspnea: after activity."

Pulse:

irregular—variation in the force and frequency of the pulse.

bounding—the volume of the pulse reaches a higher level than normal, then disappears quickly.

thready—a fine, scarcely perceptible pulse.

Respirations:

nonrhythmic—the breathing of the patient is marked by an irregular pattern.

short of breath—shallow and rapid respirations.

labored—respirations requiring obvious expenditure of energy.

dyspnea: at rest—condition exists even when patient is quietly resting.

dyspnea: after activity—condition exists following any physical exertion.

orthopnea—breathing is possible only when person sits or stands in erect position.

wheezing—production of whistling sounds during difficult breathing.

3. RESPIRATORY AIDS

Specify type of aid and note the amount of oxygen or frequency of suctioning or ventilator pressure. If the patient is not using any aid to assist his breathing, check "none."

4. RESPONSE TO EATING

nausea—inclination to vomit; usually precedes vomiting.

anorexia—lacks desire to eat; not hungry for prolonged length of time.

refuses to eat—will not eat food or take fluids over a period of time.

diff. chewing—difficulty in crushing or grinding food with the teeth.

diff. swallowing—difficulty in receiving something into the body through the mouth and esophagus.

distorted taste—misinterpretation of tastes.

heartburn—a burning discomfort behind the lower part of the sternum.

distention—feeling of fullness, or stomach and abdomen may be distended/swollen in appearance, usually due to swallowing air or gas in lower bowel.

undue thirst—marked increased desire for liquids.

hunger—increased desire for food or increased appetite.

Small intake of:

fluids—insufficient to maintain fluid balance.

food—insufficient amount to maintain proper nutrition.

5. EENT

If term(s) apply to only one eye, ear or side of the body, place a "R" or "L" in the space under the categories listed that specify frequency and/or amount. If term(s) apply to both, record a "B" in the column(s).

Vision:

blurring—something perceived as vague or lacking definite outline.

diplopia—double vision; seeing of one object as two.

Pupils:

dilated—enlargement of pupil; average diameter is 4 to 5 mm.

unequal—difference in size of one pupil in comparison to the other.

pinpoint—marked constriction.

Lids:

burning—an irritating sensation of eyes or lids.

itching—prickling sensation of the eyes or lids resulting in the desire to rub the eyes/lids.

reddened—reddish color; irritated.

swollen—puffy enlargement.

secretions—abnormal tearing or exudate.

Ears:

tinnitus—ringing sound in the ears.

cerumen—soft brown wax-like secretion found in the external canal of the ear.

Nose/Throat:

nasal discharge—thin, watery, or thick mucous drainage.

nosebleed—bright red bloody drainage from one or both sides of the nose. If only one side, specify.

throat irritation—reddened, swollen, and may be painful.

Mouth:

dental problem—caries (tooth decay), toothache, missing teeth.

not clean—mouth and teeth have a thick mucous coating, or food particles may be lodged along gums and between teeth.

coated tongue—a thick furry coating of the tongue which may be one of various colors.

lesions—single or multiple infected sores, such as, fever blister.

bleeding—oozing or frank bleeding from gums or sores in mouth or on lips.

foul odor—offensive odor, bad breath.

6. COUGH

acute—severe with rapid onset and a short course.

chronic—of long duration.

hacking—a frequent, short cough.

nonproductive—dry cough; does not raise any exudate or sputum from the bronchi or lungs.

paroxysmal—a sudden periodic attack of coughing.

Sputum:

green—thick, viscid, muco-purulent, frothy, inoffensive, may have sweetish odor.

yellow—thick, often offensive as in empyema, bronchiectasis, etc.

blood-tinged—sputum that is pinkish or has streaks of red blood in it.

gray—sputum is a dirty-white.

viscous—thick, tenacious mucoid exudate.

7. ELIMINATION

Emesis:

Vomiting of contents of the gastro-intestinal tract through the mouth.

bile—a thick, viscid fluid with a bitter taste, secreted by the liver, stored in the gall bladder and varying in color; from liver, it is straw color; from the gall bladder, it varies from yellow to brown and green; there are more solids in green bile and it is mixed with mucus.

undigested food—recognizable particles of food.

bloody—emesis contains red blood.

liquids—vomitus composed primarily of fluids.

Bowel:

Problems:

flatulence—gas in the digestive tract.

constipated—difficult defecation; infrequent passage of feces with passage of unduly hard and dry fecal material.

diarrhea—morbid frequency of bowel evacuation; the stools having more or less fluid consistency.

involuntary—inability to control the movement of the bowels.

impacted—accumulation of feces in the rectum pressed firmly together so as to be immovable.

Color:

clay—refers to a stool that is lacking in color.

tarry—refers to black or blackish-brown viscous semiliquid or liquid stools.
fresh blood—refers to obvious bright red blood in the stool.

Urinary:
Voiding Problems:
frequency—urinating at short intervals.
urgency—the need to void suddenly with inability to retain urine very long without acute distress.
burning—a scalding sensation.
dribbling—an intermittent flow of urine.
incontinent—inability to control urination.

Color:
Select the term (cloudy, dark orange, pink, red) that best describes the color of the urine.
frothy—on standing urine indicates presence of bile.
sediment—may be white, which denotes pus and/or alkaline urine.
albuminuria—presence of readily detectable amounts of serum protein.
glycosuria—presence of sugar in the urine.

8. GENITALS
L.M.P. date—Record date of last menstrual period for any female patient of childbearing age.

Discharge:
Terms may apply to male or female patients. Male—discharge from the penis. Female—discharge from the vagina.
white—milky thick drainage.
yellow—yellowish discharge.
spotting—small amounts of fresh blood (not female menstrual flow).
foul odor—strong offensive odor associated with discharge (not odor associated with menstrual period for female patients).

9. DRAINAGE TUBES
If the patient has one or more drainage tubes in place, list each sequentially in spaces "A," "B," "C," or "D." Place the letter identifying the tube in the space(s) on the same line to which the term applies. Spaces are provided to note color and consistency of drainage. This section should not be used if quantity is to be recorded accurately, although small, moderate, or large amount may be noted by recording the letter identifying the tube in the appropriate column.
not patent—the tube is obstructed.
suction—a mechanical device used to drain the cavity by negative pressure.
gravity—a natural flow of fluids unaided by mechanical devices.
irrigated—a treatment to introduce fluid into the tube to keep it open and draining.

10. OBSERVED BEHAVIOR
lethargic—functional torpor or sluggishness; stupor or abnormal drowsiness.
confused—perplexed or bewildered; answers to questions are inappropriate.
disoriented—incorrectly perceives self and environment in relation to time, place, or person.
inattentive—inability to focus mind on an idea or some aspect of the world or reality.
forgetful—temporary loss of memory.
drowsiness—unusually sleepy; unable to stay awake for any length of time.
insomnia—inability to sleep; abnormal wakefulness.

11. PERCEPTIONS OF ILLNESS
Record the patient's understanding of the signs and symptoms of his present illness.
misconceptions—incorrect ideas and beliefs about illness; misunderstands the meaning of signs and symptoms of illness.
inadequate information—insufficient knowledge about the disease and/or signs and symptoms of illness.
refuses to talk about illness—avoids any discussion of disease or condition.
preoccupied with illness—signs and symptoms completely absorb the patient's mind and interests.
denial—refusal to admit the truth or reality about illness or prognosis.

12. PERCEPTIONS OF PROGNOSIS
Record the patient's expectations in relation to his recovery from *this* illness.
complete recovery—full recuperation to former state of health.

no change—condition will remain the same.
to die—death within this hospitalization.
doesn't know—lack of knowledge about probable recovery level.
partial recovery—incomplete recuperation to former state of health.

Sections 13, 14, 15, and 16 have been organized so that the symptoms may be specifically located by selecting the appropriate code number(s) from the "Body Location" section at the bottom of this page. Please note that the darker type, upper case words pertain to all the parts listed under that column. Example: "16 CHEST." If the patient frequently has severe aching pain in the entire chest area, both right and left, anterior and posterior, record the number "16" under both columns titled "frequently," and "severe" in the spaces to the right of this term.

13. WOUND

inflamed—tissue reaction to injury characterized by pain, heat, swelling, and redness.
hematoma—a tumor-like mass produced by coagulation of extravasated blood in a tissue.
Drainage:
serous—thin and watery, like the liquid left after the clotting of blood.
sero-sanguineous—composed of serum and blood.
sanguineous—consisting of blood.
mueo-purulent—containing mucus and pus.
bile—a thick, viscid fluid with a bitter taste, secreted by the liver, stored in the gall bladder and varies in color; from the liver, it is straw color; from the gall bladder, it varies from yellow to brown and green; there are more solids in green bile and it is mixed with mucus.
fecal matter—content of large bowel.
urine—secretion from kidney and stored in the bladder.
odor—select a term that best describes the odor associated with the drainage or discharge from the wound. If the odor is not significant or abnormal, then do not use this term.
necrotic—death of areas of tissue or bone surrounded by healthy parts.
sloughing—the process in which the necrotic tissue liquefies, resulting in drainage.
size/cm; depth/cm—specify as accurately as possible the size and depth of the area affected. If measuring device can be used to measure the depth and diameter, record the exact size and depth, if not, give approximate figures.

14. PAIN

aching—a dull, generalized, persistent pain.
cramp-like—severe, paroxysmal type pains.
throbbing—pulsating.
stabbing—acute cutting or sharp pain.
tenderness—sensitiveness to pain upon pressure.
burning—pain accompanied by a feeling of heat; searing.

15. EXTREMITIES

No distal pulses—the pulse cannot be obtained by compressing the arteries at the points farthest from the heart in any of the extremities.
paresthesia—abnormal sensation without objective cause, such as numbness, prickling and tingling, heightened sensitivity.
limited movement—lack of full range of motion of a part or the whole extremity.
paralyzed—inability to move a part or the whole extremity.
swelling—an abnormal localized enlargement.
edema—an excessive amount of tissue fluid, which may be local or general.
weakness—lacking in strength.
hand grip weak—market decrease in ability to grasp an object.
contractures—permanent contraction of a muscle due to spasm or paralysis.
muscle spasms—involuntary convulsive muscular contraction.

NURSING ASSESSMENT: MEDICATIONS, TREATMENTS, DIET THERAPY

MEDICAL THERAPY	DATE
Renewal of orders needed by:	
Did not keep appointment for medical care	

Code: ✓ Both P & F
P=Patient
F=Family

Patient Information

ASSESSMENT OF THERAPY												
UNABLE TO:		MAKES ERRORS IN:					LACKS:					
Prepare	Administer	Procedure	Preparation	Amount	Time	Other	Knowledge	Understanding	Supplies	Other

1. MEDICATIONS

PRESCRIBED MEDICATIONS

NAME OF DRUG	DATE PRESCRIBED	DOSAGE	FREQUENCY	REASON OR SPECIAL INSTRUCTION(S)

NON-PRESCRIBED MEDICATIONS

NAME OF DRUG	DATE STARTED	DOSAGE	FREQUENCY	REASON(S) FOR TAKING DRUG

2. TREATMENTS

TYPE OF TREATMENT	DATE PRESCRIBED	FREQUENCY	SPECIAL INSTRUCTIONS

3. DIET THERAPY

TYPE OF SPECIAL DIET	DATE PRESCRIBED	AMTS./FREQ.	SPECIAL INSTRUCTIONS

CHN FORM 1003

SIGNATURE OF NURSE: _____ R.N.

DATE OF ASSESSMENT ___ ___ ___
mo. day yr.

tremors—quivering; an involuntary movement of a convulsive nature.

16. SKIN

flushed—redness of the face and neck.

pale—lack of color; pallor.

cyanotic—bluish or grayish cast to the skin.

jaundiced—yellow color of skin or the sclera of the eyes.

hot—skin feels abnormally warm to the touch.

cold—lacking in normal body warmth.

scabs/lesions—crust of a cutaneous sore, wound, ulcer or pustule formed by drying up of discharge; single or multiple infected patch in skin disease.

weeping—oozes a watery secretion.

dry/itching—rough and scaly skin; a teasing irritation of the skin that arouses the desire to scratch the area.

rash—any eruption of the skin; usually a shade of red.

bruise—superficial discoloration due to hemorrhage into the tissues from ruptured vessels.

reddened—diffuse red discoloration of the skin.

lumps—an abnormal mass that performs no physiological function.

17. ACTIVITY LEVEL

Check the term that is appropriate to describe the highest or maximum level of the patient's activity. Example, if patient may be up in a chair but not go to bathroom, check "chair only." If he needs someone to assist him to get out of bed into chair and family member or friend does this, place check in column under "Family Care." If this person needs to be taught how to transfer the patient, record a "F" under the column "Teaching and Demonstration."

18. AID TO MOBILITY

Check only those terms which apply to this patient and identify if he needs assistance or care by others.

N.A.—not applicable to this patient.

prosthesis—specify the type of prosthesis used that permits him to be active or to function. (If the prosthesis is an artificial limb, this would be appropriate. However, an artificial eye would not be noted here.)

19. HYGIENE ACTIVITIES

If the patient is able to do all activities listed in this section without any assistance or need any nursing supervision or support, you may check "Independent," otherwise, check those activities in which he needs assistance by others.

20. RESPONSE TO ACTIVITY

The terms listed in this section are used frequently to describe most patients' physiological response to mobility following illness or surgery. The patient or family may report these symptoms or you may observe them when visiting the patient. Frequency can only be recorded based on subjective (patient) data. Severity may also have to be based on the patient's description of his response to activity.

The nurse should sign her name at the bottom of the page.

BEST COPY AVAILABLE

Manual

Nursing Assessment: Medications, Treatments, Diet Therapy (CHN 1003)

Directions for Use:

In the upper right hand corner, record the patient's name, address and birthdate, or use an addressograph plate, if available.

In the lower right hand corner, write in the month, day, and year the assessment was made.

If the patient and/or family are having any problems in relation to the therapy regimen, identify by using code "P" for patient and "F" for family. If both, use check mark in the appropriate column.

Medical Therapy

Renewal of orders needed by:
If according to agency policy, new orders are required from the physician or clinic attending the patient, indicate in the space provided, the date by which the renewal of orders is needed.

Did not keep appointment for medical care:
If the patient did not keep his scheduled appointment with his physician or clinic for any reason, write in the date of that appointment in the space provided.

Therapy

List all prescribed and nonprescribed medications, treatments, and special diets the patient is presently receiving; include the date started or prescribed, the dosage or amount, the frequency and the reason(s) or special instructions in the spaces provided. If more space is needed, use the reverse side of the sheet. Specific instructions and/or definition of terms are as follows:

1. MEDICATIONS
   Prescribed medications—those that are prescribed by a physician or clinic.
   Name of drug—as labeled.
   Date prescribed—the date the physician or clinic prescribed the drug.
   Dosage—amount of drug prescribed.
   Frequency—how often the drug is to be taken, e.g., t.i.d.; q 4h; b.i.d.; 2x's/wk; etc.
   Reason or special instruction(s)—include information regarding the administration of the drug, such as, I.M. only, take with milk, crush tablets; check pulse first, etc., and/or reason for taking the drug.
   Nonprescribed medications—those drugs, not prescribed by a physician or clinic, which the patient takes on his own.
   Name of drug—as labeled or stated by patient or family.
   Date started—the approximate date when the patient started using the drug.
   Dosage—amount of drug taken per dose.
   Frequency—how often the drug is taken.
   Reason(s) for taking drug—the patient's rationale for taking the drug.
2. TREATMENTS
   Type of treatment—a name or phrase describing the treatment, e.g., bladder irrigation; s.s. enema; dry, sterile dressing; range of motion, etc.
   Date prescribed—the date the physician or clinic prescribed the treatment.
   Frequency—how often treatment is to be administered or taken, e.g., mornings; daily; twice weekly, etc.
   Special instructions—include any special information regarding the treatment such as, temperature of solution; amount of solution; use no adhesive tape; give slowly, etc.
3. DIET THERAPY
   Do not make an entry if the patient is on a regular diet.
   Type of special diet—the name or phrase describing the diet, e.g., low-salt, 1,800 calorie, low fat, etc.
   Date prescribed—the date the physician or clinic prescribed the diet.

Amounts/frequency—if known or appropriate, length of time patient is to be on the diet, or, if supplements are to be taken, how often, etc. Also include amount of milligrams, units, calories, etc.

Special instructions—include any special information regarding the diet such as: "no salt with meals," patient preferences, preparation of foods, etc.

ASSESSMENT OF THERAPY

At the top of the columns on the right hand side of the page are possible problems that may arise in therapy on the part of either the patient or the family. If any of these problems are identified in relation to a medication, a treatment or a diet, place a checkmark in the appropriate column and on the same line as the particular therapy. An explanation of terms is as follows:

Unable to:

prepare/administer—is not able to carry out the preparation and/or the procedure of the therapy.

Makes errors in:

procedure—errors in the performance and/or administration of a medication, treatment or special diet.

preparation—does not follow the accepted or recommended steps in either the care and/or preparation of supplies, equipment, drugs, food, etc.

amount—the quantity of a medication, solution, nutrient, etc., either exceeded or was less than that prescribed or recommended.

time—does not follow the prescribed or recommended time pattern of a therapy, e.g., takes drug after meals rather than before, or omits therapy.

other—if none of the previous terms apply in regard to an error made by either the patient or the family, use this space to write in the error you have identified.

Lacks:

knowledge/understanding—patient/family may not understand the purpose of the therapy or may not know possible adverse effects or symptoms, or needs instructions regarding therapy, etc.

supplies—does not have necessary medications, equipment, supplies, food, etc. on hand for carrying out a therapy.

other—if none of the previous terms apply to a problem you have identified, use this space to write in the problem.

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NURSING ASSESSMENT: FAMILY INTERACTIONS

DATE OF ASSESSMENT: | | | |

FAMILY SURNAME: _____

HEAD OF HOUSEHOLD: _____

FAMILY AND/OR OTHERS LIVING IN HOME If more than four use additional page(s).				
(List all living in home) DO INCLUDE PATIENT	First names of members			Specify if different surname
1. VERBAL BEHAVIOR				
no verbal communication				
limited verbal communication				
dominates conversation				
verbally abusive				
makes all decisions				
makes no decisions				
distorts				
disoriented				
rationalizes				
lacks confidence				
does not compromise				
compromises reluctantly				
compliant				
AVOIDS DISCUSSION OF: self				
patient's condition				
relationships with others				
illness or condition				
other:				
REJECTS: ideas				
persons				
suggestions				
sexual relations				
BELITTLES: self				
others				
EXPRESSES FEELINGS OF: sadness				
distrust in others				
nervousness				
concern				
anger				
fear				
wish to die				
wish to be alone				
undesirable effects from health problem(s)				
anxiety				
other:				
OTHER SIGNIFICANT VERBAL BEHAVIOR NOT COVERED ABOVE: 1.				
2.				
3.				

CHN FORM 1004

signature _____ R.N.

NURSING ASSESSMENT: FAMILY INTERACTIONS

2. NON-VERBAL BEHAVIOR

FAMILY AND/OR OTHERS LIVING IN HOME If more than four use additional page(s).

(List all living in home) DO INCLUDE PATIENT	First names of members		Specify if different surname	
LEAVES ROOM WHEN:				
nurse enters				
illness is discussed				
other				
MOOD:				
shows little or no affect				
has frequent mood changes				
cries easily/frequently				
other				
BODY LANGUAGE:				
makes facial grimaces				
unusual hand or body movements				
moves about continuously				
seldom moves or changes posture				
strikes others/objects				
isolates self				
ignores others				
inattentive				
neglects appearance				
inappropriate behavior				
other				
BEHAVIOR PATTERNS:				
destructive				
steals				
bites nails				
other				
significant sleep problems				
has nightmares				
restless during sleep period				
other				
EATING PATTERNS:				
picks at food				
rejects food				
over eats				
skips meals				
does not eat with family				
other				
OTHER SIGNIFICANT NON-VERBAL BEHAVIOR NOT COVERED ABOVE: 1.				
2.				
3.				
4.				

CHN FORM 1004

signature _____ R.N.

Manual

Nursing Assessment: Family Interactions (CHN 1004)

Introduction:

The purpose of this form is to guide the nurse in identifying and recording those aspects of the verbal and nonverbal behavior of the patient and his family which may be significant and alert the nurse to the need for action. This action may be gathering more data about the particular situation, or it may be specific activities such as supportive therapy, referral or teaching.

Specific Directions:

At top of page one, record date of assessment, family surname, and head of household. Write in the names of the patient, family members, or others. If more than four, use additional forms. If a particular behavior applies to any of these persons, so indicate by placing a checkmark in the appropriate column.

The content of this form is divided into two parts: verbal behavior and nonverbal behavior. Verbal behavior refers to the spoken word. Nonverbal behavior is the observable manifestations of a person's thoughts, feelings, and actions; the manner of conducting oneself. A definition or explanation of the terms and phrases included follow:

1. VERBAL BEHAVIOR

Patterns:

- no verbal communication—is unable to, or refuses to, or does not respond with words.
- limited verbal communication—responds in monosyllables or in a few words consistently throughout a period of interaction.
- dominates conversation—monopolizes the discussion; or attempts to control either what is said or who says it; or is talkative to the point where others are partially or totally excluded from speaking.
- verbally abusive—uses harsh or profane or obscence language that may or may not be used as a threat to others.
- makes all decisions—has a voice in or takes the responsibility for making major and minor decisions.
- makes no decisions—has no voice in or does not take responsibility for making any decisions.
- distorts—purposefully gives the wrong impression of something or alters the meaning. Lies or gives erroneous information.
- is disoriented—incorrectly perceives self and/or environment in relation to time, place or person. Confused.
- rationalizes—attempts to justify or defend an unacceptable attitude or trait, its mode of expression, or its consequences or sequelae by: withholding, misrepresenting, or falsifying essential facts; by blaming an incidental cause; or, by comparing oneself with others in such manner as to excuse oneself.
- lacks confidence—feels unsure or does not have faith in oneself or others.
- does not compromise—does not come to a mutual agreement, or accepts only one point of view, or is argumentative.
- compromises reluctantly—comes to a mutual agreement only with reservations, or with hesitation, or after considerable resistance.
- compliant—submissiveness; tends to yield to others.

Avoids discussion of:

- self—refuses to or will not talk about himself.
- patient's condition—the physical, emotional, or social aspects of the patient's situation.
- relationships with others—the on-going, interpersonal interactions between that person and others, especially those meaningful to him.

other—any other subject or topic that the patient or household member avoids discussing.

Rejects:
- illness or condition—patient or members of family refuse to accept reality of the situation; may deny completely that he has the illness or condition.
- ideas—opinionated; will not accept others' ideas; thinks own ideas are always right.
- persons—wishes to be left alone; does not form any close relationships with others.
- suggestions—refuses to listen to others or accept advice or counsel.
- sexual relations—refuses to have or avoids sexual intercourse with mate on a temporary or permanent basis.

Belittles:
- self—to disparage oneself, or to make little of self.
- others—as above but applied to other people.

Expresses feelings of:
- sadness—absence of cheerfulness, grieving, sorrowful.
- distrust in others—has no confidence in or is suspicious of others.
- nervousness—easily excited or irritated, jumpy, apprehensive, uneasy.
- concern—a state of uncertainty and apprehension.
- anger—a strong feeling of displeasure and antagonism.
- fear—an unpleasant, often strong emotion caused by anticipation or awareness of danger. Implies anxiety and usually loss of courage.
- wish to die—verbalized death wish; says he has nothing to live for or no desire to live.
- wish to be alone—expressed desire to have minimal or no contact with anyone.
- undesirable effects from health problem(s)—the changes within the person or extraneous to him that have occurred as a result of a disease, illness, accident, injury, e.g., feelings of disgust towards colostomy; change in body image as a result of amputation; restrictions in activities imposed by coronary heart disease; diminishing number of visits by friends since diagnosis of tuberculosis, etc.
- anxiety—a painful or apprehensive uneasiness of mind.
- other—write in any other expressed feelings not covered in this section.

Other significant verbal behavior not covered above:

Include any other verbal behavior that is significant about the patient and/or family members.

2. NONVERBAL BEHAVIOR

Leaves room when:
- nurse enters, illness is discussed, other—these behaviors should be recorded when they apply to any individual who should remain during nurse's visit or who should be present while illness or condition is under discussion. Note any other observed cause for physical withdrawal.

Mood:
- shows little or no effect—consistently does not react or respond to an experience, especially one of an emotional nature, e.g., no facial changes (smiling, frowning).
- has frequent mood changes—mood or state of mind, in regard to or as a result of emotion changes either suddenly or often without apparent reason or explanation, e.g., is quiet and withdrawn for a period of hours and then becomes outgoing and talkative, then again changes to hostility in a short span of time.
- cries easily/frequently—weeps for little or no apparent reason or weeps more than might be expected for the situation.

Body language:
- avoids physical contact—shies away from or withdraws from the touch

of others or avoids any kind of physical contact with others.

avoids eye contact—seldom or never looks into the eyes of others, especially when conversation is directed to him.

does not stop activities to talk—continues doing some form of activity, such as housecleaning, watching television, etc. while an attempt is being made to verbally communicate with him.

makes facial grimaces—unusual or inappropriate expressions of the face.

unusual hand or body movements—motions or use of hands or body are inappropriate or exaggerated or repetitious.

moves about continuously—does not stand or sit in one place for more than a brief period of time; is constantly in motion from one spot to another.

seldom moves or changes posture—remains in one position, whether standing, sitting or lying, for a prolonged period of time.

strikes others/objects—uses extremities or other parts of the body to forcibly hit either other people, animals or inanimate objects such as walls, chairs, toys, etc.

Behavior patterns:

isolates self—voluntarily removes self from the presence of others continuously. Avoids others.

ignores others—does not, verbally or nonverbally, acknowledge the existence of others. Purposefully disregards the behavior or presence of others.

inattentive—is easily distracted or does not give full awareness to the immediate activity or conversation.

neglects appearance—makes little or no attempt to care for the body, hair and/or clothes in keeping with the existing accepted standards. Is unkempt, disheveled, dirty, wrinkled, etc.

inappropriate behavior—acts in a manner not suitable or acceptable to the situation.

destructive—purposefully destroys or ruins objects, property, etc.

steals—takes from another without right.

bites nails—self-explanatory.

unusual sleep patterns—write in the type of sleeping pattern only if it has an adverse effect on the individual patient or family.

has nightmares—has frightening dreams that produce a feeling of anxiety or terror.

restless during sleep period—does not remain asleep for any period of time, or "tosses and turns," or prowls about the house, or moves about in bed during sleep.

Eating patterns:

picks at food—takes infrequent mouthfuls of food during a meal, and/or primarily leaves food on the plate, or plays with the food without ingesting it.

rejects food—refuses to eat certain foods or all foods for a limited period of time.

overeats—ingests large amounts of food and/or ingests food continuously between meals.

skips meals—goes without breakfast, lunch, or supper.

does not eat with family—eats meals at a time other than when the rest of the household eats.

Other significant nonverbal behavior not covered above:

Include any other nonverbal behavior that you feel is significant.

NURSING ASSESSMENT:
FAMILY ROLES AND ACTIVITY PATTERNS

DATE OF ASSESSMENT: ☐☐☐

FAMILY SURNAME: _____

HEAD OF HOUSEHOLD: _____

FAMILY AND/OR OTHERS LIVING IN HOME If more than four use additional page(s).				
(List all living in home) DO INCLUDE PATIENT	First names of members		(Specify if different surname)	
1. LEISURE TIME ACTIVITIES				
No leisure time activities				
Spends leisure time alone				
Lacks recreational materials				
Lacks play area				
Has few friends				
Has no friends				
Does not socialize				
Little/no participation:				
in family activities				
Other: _____				
2. FAMILY ROLES IN MANAGEMENT OF HOME				
Unable to help at home				
Unwilling to help at home				
Not encouraged to help at home				
Does greater share of work at				
home than would be expected				
Other: _____				
3. SCHOOL ACTIVITIES				
Frequently absent from school				
Disinterested in school				
Dislikes school				
Lacks parental encouragement				
Does not desire education:				
After legal age				
Beyond high school				
Other: _____				
4. DISCIPLINE				
METHODS OF: Isolation				
Physical contact				
Verbal threats				
Withholding of: _____				
Other _____				
PERCEPTION OF:				
Needs disciplining				
Disciplining not effective				
Disciplined excessively				
Disciplined unfairly				
Reacts unfavorably to disciplining				
Other: _____				
Additonal:				

CHN FORM 1005

signature _____ R.N.

Manual

Nursing Assessment: Family Roles and Activity Patterns (CHN 1005)

Directions for Use:

At the top of the page, enter the date the assessment was made, the surname or family name, and the name of the head of household. At the top of the columns, space is provided to write in the first names of members of the household. If there are more than four living in the household, use a second sheet. If any of the terms listed apply to a family member, indicate this by placing a checkmark next to that term and in the column for that person. There is also room for more specific information to be written in, if needed.

This form is divided into four major areas: leisure time activities, family roles in management of home, school activities, and discipline. Only those areas that are appropriate for the particular patient/family need be considered; e.g., if there are no children below 18 years of age in the home, omit the last two areas.

1. LEISURE TIME ACTIVITIES

No leisure time activities—does not participate in hobbies, sports, play, recreation, etc. during the period of time free from work or duties.

Spends leisure time alone—the usual pattern for the individual is to spend time free from work or duties by himself.

Lacks recreational materials—does not have equipment, supplies, etc. needed for play or recreation, e.g., lacks toys, books, radio, television, art materials, etc. This item should be considered only within the context of the individual or family tastes and preferences for recreation.

Lacks play area—has no place within the home or the immediate neighborhood to perform the recreational activities of the individual's preference.

Has few friends—has only a small number of persons, excluding family members, with whom that individual relates to on a personal basis.

Has no friends—has no one to relate to on a personal basis.

Does not socialize—generally does not join or associate with others. Not inclined to seek or enjoy companionship.

Little/no participation in family activities—circle the word (little or no) which best describes the individual. Free time is not spent or is rarely spent with family.

Other—use this space to write in any other observations about leisure time activities not already covered in the preceding items.

2. FAMILY ROLES IN MANAGEMENT OF HOME

Unable to help at home—not able to assist with chores, housework, etc.

Unwilling to help at home—refuses to assist with chores, housework, etc.

Not encouraged to help at home—is willing and able to assist with chores, housework, etc. but does not do so because of lack of encouragement, discouragement, etc. on the part of others.

Does greater share of work at home than would be expected—the responsibility of performing household tasks is disproportionate to the expected role of the individual.

Other—write in any other significant observations regarding family roles in management of home not already covered in the preceding items.

3. SCHOOL ACTIVITIES

Frequently absent from school—often misses school sessions for any reason; over and above usually expected absences.

Disinterested in school—appears indifferent or apathetic towards school.

Dislikes school—self-explanatory.

Lacks parental encouragement—parents do not stimulate child to attend school or do homework, etc., or they do not

foster a learning environment for the child.

Does not desire education:

after legal age—beyond the age when the child, by law, is no longer required to attend school.

beyond high school—after graduation from high school.

Other—write in any other significant observations regarding school activities not already covered in the preceding items.

4. DISCIPLINE

The terms or phrases in the first part of this section refer to the methods or means of disciplining that parents, guardians, spouses, etc. may use with others in the household.

Methods of:

isolation—separating the person physically or emotionally from others.

physical contact—spanking, slapping, hitting or otherwise using physical means of disciplining.

veral threats—word expressions of intention to inflict punishment.

witholding of:—write in the term you wish to use such as, love, food, television privileges, etc.

other—write in any other significant observations not already covered in the preceding items.

The terms or phrases in the second part of this section refer to the responses of the person to disciplining.

Perception of:

needs disciplining—limits need to be set by parents on what the child can and cannot do.

disciplining not effective—the child persists in the same kind of behavior in spite of some form of punishment.

disciplined excessively—punishment or limits set are out of proportion to the infraction or behavior.

disciplined unfairly—punishment is applied when not deserved.

reacts unfavorably to disciplining—the behavior intensifies after disciplining rather than stops, or the child substitutes another form of behavior that is equally unacceptable, or the child has an emotional or physical reaction of a serious nature.

other—write in any other significant observations not already covered in the preceding items.

additional—use this space to include any other patterns of discipline not previously covered but which you feel are significant.

NURSING ASSESSMENT: CLINIC SUMMARY

NAME OF CLINIC: _____

ADDRESS: _____

Primary Diagnosis: _____

Secondary: _____

Patient Indentification

_____

Allergies _____

Date of Next Visit: _____

Clinic _____ Clinic _____

CLINIC APPOINTMENTS:

twice a week ☐ once/month ☐
weekly ☐ in 2 months ☐
every 2 weeks ☐ in 6 months ☐
other _____

1. DIAGNOSTIC TESTS

None ☐

SPECIMENS

Urine analysis ☐ culture ☐

Blood CBC ☐ T&CM ☐ chem ☐

other _____
other _____
other _____

TESTS DONE

chest x-ray ☐
EKG ☐
other _____
other _____
other _____

Therapy _____
Therapy _____

Comments: _____

2. VITAL SIGNS

B/P ☐☐☐ / ☐☐☐

TEMP (°F) ☐☐☐☐ (circle) R O A

PULSE ☐☐☐ RESP ☐☐

Height _____

Weight _____

3. CHANGES IN THERAPY

MEDICATIONS

drug	dose	time	route

TREATMENTS

	time	frequency

DIET

_____
_____
_____
_____

OTHER

_____
_____
_____
_____

4. NURSING EVALUATION FOR FOLLOW-UP CARE

_____
_____
_____
_____

FORM 0006

signature _____ M.D. signature _____ R.N.

Manual

Nursing Assessment: Clinic Summary (0006)

The purpose of this form is to provide a means of communicating information about current therapy administered and any changes in the plan of therapy initiated by a clinic physician or identified by the clinic nurse.

The information should be communicated immediately to the community health agency or the health care facility providing care for the patient. This can be done by using the computer-assisted system or by forwarding a copy of the completed form.

Complete patient identification data is to be recorded in the space at the top right-hand side of the form. Use label prepared by data processing or addressograph plate. If neither is available, write in the following information: name, mailing address, birthdate, sex, clinic I.D. number, and telephone number.

Specific Directions:

Name of clinic—Record the name of the clinic and the speciality division within the clinic, for example, Meyer Hospital, Eye Clinic.

Address—mailing address (include zip code) telephone number and extension. Public Health nurse may need to contact clinic nurse for clarification.

Primary diagnosis—condition or current health problem being treated.

Secondary diagnosis—other contributing health problems that are being treated or that affect present condition.

Allergies—altered reaction of body tissues to a specific substance.

Date of next visit—Record the date(s) of next visit to this and to any other clinic as ordered by physician. (Name of clinic(s) should be noted also.)

Clinic appointments—Check the frequency of the patient's scheduled appointments to this clinic.

1. DIAGNOSTIC TESTS

The most frequently ordered diagnostic procedures are listed. Check those which were done during this clinic visit. Several spaces have been provided to write in the name(s) of any other tests not listed. Space is also provided to record any therapeutic procedures done. Under comments, note any untoward reactions or patient responses to therapy.

2. VITAL SIGNS

Record the vital signs in the appropriate spaces.

3. CHANGES IN THERAPY

Note any new physician orders for medications, treatments, diet or other therapy. If any previous orders are discontinued, please specify.

4. NURSING EVALUATION FOR FOLLOWUP CARE

Space is provided for the clinic nurse to record any problems or findings that would be helpful to the nurse and others who are currently caring for the patient. For example, the clinic nurse may identify the patient needs, additional teaching, health counseling, or procedures that the patient is doing.

This form may be used by both the physician and nurse. If the doctor writes any orders or instructions, he must sign in the space at the bottom of the left hand side of the page. The nurse signs on the line to the right.

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Appendix A

Appendix B

Appendix C

Appendix D

Appendix E

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